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Child and Adolescent Caregiving for Family: Emotional, Social, Physical, and Academic Risk and Individual Differences

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In the United States, it is estimated that more than 5.4 million children and adolescents under age 18 provide care for adult family members who are aging or have a chronic illness, disability, or other health conditions that require assistance. However, little is known about how providing care to the family during childhood and adolescence impacts youth development. We examined whether caregiving as a youth is associated with emotional challenges, peer difficulties, course grades, and physical health risk behaviors. A large, diverse sample of middle and high school students in Florida completed the first systematic school-based survey in the U.S. to date to count caregiving youth ($N = 10{,}880$; 52% female; $M_{age} = 14.40$, 40% Latinx). Youth reported the amount of caregiving they provided to the family each week, in addition to items reflecting their emotional challenges (e.g., suicidality), peer difficulties (e.g., experiences of conflict or victimization), academic course grades, and health risk behaviors (e.g., diet, physical activity, sleep). We found that Latinx and Black youth provided higher levels of caregiving to the family compared to youth from White non-Latinx, Asian, or Other ethnicities. Caregiving was associated with more emotional challenges, more peer difficulties, and lower course grades for all groups. In addition, providing caregiving was associated with a less healthy diet among older youth and sleeping less than 8 hr per night among White non-Latinx youth. These findings highlight a need to support caregiving youth and their families via policies and institutional supports.

Keywords: caregiving youth, child development, family caregiving

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Caregiving for a loved one can be rewarding, but it can also be demanding and require physical strength, emotional resilience, practical knowledge and skill, and significant amounts of time. Although children and adolescents are commonly perceived as the recipients of care, many youth also *provide* care for loved ones every day. In the United States (U.S.), it is estimated that more than 5.4 million "caregiving youth"—children and adolescents under age 18—provide substantial, ongoing care for dependent family members who are aging or have chronic illness or disability which require assistance (AARP & National Alliance for Caregiving, 2020). Moreover, the number of caregiving youth in the U.S. has nearly tripled in the last 15 years (Armstrong-Carter et al., 2021). However, research in the U.S. has been limited as compared to other countries (Leu & Becker, 2017), with little research focused on how youth's provision of care to the family impacts their development. Drawing on a large, diverse sample of children and adolescents in Florida, this study investigated whether caregiving as a youth is associated with emotional challenges, peer difficulties, course grades, and health risk behaviors. Further, we examined whether the association between providing care as a youth and developmental outcomes varies according to individual differences in gender, age, and race/ethnicity.

Caregiving Youth and Theoretical Grounding

Every day, all over the world, children and adolescents help and support their families. According to Family Systems Theory (Cox & Paley, 2003), youths' provision of support to the family ideally functions to create a shared network of support between family members which can be mutually beneficial. However, youth can also take on much more than simply helping behaviors or chores. The theory of parentification was developed to explain conditions in which familial roles that are normally assumed to be taken on by parents are instead filled by children, often with negative implications for their development (Chase, 1999; Hooper et al., 2014). In many households, youth's household activities transition from

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moderate to high levels of assistance in cases where ongoing, medically intense, or time-consuming care to a family member is needed, for instance, if there is a parent, grandparent, or sibling who experiences chronic illness, disability, or age-related decline. Youths' provision of caregiving can include a wide variety of tasks, including managing their loved one's complicated tasks of daily living such as personal care, feeding, toileting, dressing, administering medication, and providing ongoing emotional support (Kavanaugh et al., 2016). Thus, "parentification" has been used to describe the time-consuming and continuous caregiving that has been conventionally thought to be completed by adults (Hooper et al., 2014). According to this theory, caregiving as a child or adolescent may limit youth's development because many youth may not be able to access sufficient interpersonal support, emotion regulation skills, and informational and material resources that caregiving requires. To understand and support this population of youth who provide ongoing caregiving to a chronically ill, disabled, or aging family member(s), researchers have referred to these youth as "caregiving youth" (e.g., Kavanaugh et al., 2016; Siskowski, 2006).

In the United Kingdom and Australia, as well as in many lower-income nations, caregiving youth are the focus of considerable research, are recognized by schools and governments, and receive institutional support through laws and government policies (Leu & Becker, 2017). However, in the United States, caregiving youth are recognized neither as caregivers nor as potentially vulnerable youth (Armstrong-Carter et al., 2021). Today, the number of caregiving youth in the U.S. is more than three times larger than two decades ago (AARP & National Alliance for Caregiving, 2020; Hunt et al., 2005). This sharp increase in caregiving youth is driven by social and demographic change, including an aging population, increasing life expectancy, and an increasing number of intergenerational households with grandparents who need care (Armstrong-Carter et al., 2021). Indeed, 72% of caregiving youth provide care for a grandparent or parent, whereas 11% provide care for a sibling (Hunt et al., 2005).

Given the intense physical and emotional challenges associated with caregiving among adults (Pinquart & Sörensen, 2003), understanding whether caregiving youth face heightened developmental risk is of critical importance for all sectors that are involved in youth development activities, including education and health. Although the parentification literature on caregiving youth tends to point toward developmental stresses, few studies from the U.S. have suggested how different children might experience caregiving differently, or which developmental outcomes might be important for considering how parentification differs between caregiving youth (Hooper et al., 2014). It is particularly important to investigate how caregiving is associated with multiple aspects of youth adaptation such as emotional challenges, peer difficulties, health risk behaviors, and academic outcomes. This multidimensional approach can reveal important insights into the ambiguity of caregiving, and allow for further specification of how caregiving youth adapt across developmental domains. For instance, youth could show heightened physical health risk behaviors, while simultaneously not showing emotional challenges.

Caregiving Youth and Development

A small but growing body of literature has investigated the development of caregiving youth, defined as children and adolescents who provide any amount of care specifically to a family member with an illness, disability, or aging-related needs. These studies have predominantly relied on qualitative analysis or small quantitative samples with 100 participants or less (see Armstrong-Carter et al., 2019, for a review and list of exceptions). Caregiving youth simultaneously report both satisfaction and burden associated with their caregiving activities (Siskowski, 2006). On the one hand, many caregiving youth report gaining a positive sense of purpose, familial closeness, confidence, and empathy by providing care to their loved ones (Cohen et al., 2012; Shifren & Chong, 2012). On the other hand, caregiving youth have also shown the heightened risk for emotional and social difficulties. In one sample of 1,281 middle school students, caregiving youth were more likely to report feeling ongoing frustration, anxiety, and depression, compared to their noncaregiving peers (Cohen et al., 2012). More research in larger samples is needed to clarify whether caregiving youth face heightened risk for emotional challenges and peer difficulties.

Caregiving as a child or adolescent may also be associated with health risk behaviors. In research from the U.K. and Australia, caregiving youth show higher levels of physical strain and more physical health problems compared to their peers (Aldridge & Becker, 1993; Doran et al., 2003). In the U.S., the negative link between caregiving and physical health has been demonstrated among caregiving adults (Kim & Schulz, 2008) but understudied among caregiving youth (Kavanaugh et al., 2016). One retrospective study in the U.S. of 35 women found that caregiving youth reported drinking significantly less alcohol compared to their peers (Shifren & Chong, 2012). An expert systematic review paper called for more research to investigate the possibility that caregiving by children and adolescents is associated with other health behaviors, such as diet and nutrition, physical activity, sleep, and access to medical appointments (Kavanaugh et al., 2016).

Higher levels of caregiving responsibilities have also been linked to decreased academic performance, as well as interferences with school attendance and learning (Bauman et al., 2006; Diaz et al., 2007). Caregiving youth report that their caregiving tasks conflict with their academic work, for example, the ability to complete homework, attend class, focus on learning, and perform well in school (Siskowski, 2006). This research suggests that caregiving youth face barriers to optimal academic performance. Low academic achievement, in turn, limits youths' developmental potential and restricts their employment and educational options during transitions to adulthood and throughout their life course.

In sum, prior research in the U.S. context is limited, but research to date has found that caregiving youth experience diverging developmental outcomes from their peers. More research in larger samples that simultaneously measures and differentiates between multiple developmental outcomes (e.g., emotional challenges, peer difficulties, health risk behaviors, and academic outcomes) can clarify the extent to which caregiving in youth is associated with developmental risks across domains.

Individual Differences Linking Caregiving Youth to Risk

The impact of being a caregiving youth varies across contexts and developmental periods and depends in part on the available supports and resources which can mitigate challenges. The link between caregiving and adaptation may vary according to individual differences in age, gender, and ethnicity. First, there are mean level

differences in the amount of caregiving that youth provide which vary across genders, race/ethnicities, and age groups. For instance, girls are believed to provide more care compared to boys, as are Black and Latinx children (Hunt et al., 2005; Siskowski, 2006). In the context of a growing population of caregiving youth and increasing diversity in the U.S. (Population Reference Bureau, 2016), it is important to investigate whether these patterns observed in the early 2000s persist today. Second, prior research suggests that demographic characteristics moderate the associations between helping the family and adolescent functioning (Telzer & Fuligni, 2009a), although this work has not measured caregiving explicitly, but focused on household assistance more broadly. For instance, increases in the proportion of days spent helping the family were linked to declines in academic performance among youth from Mexican and Chinese backgrounds, but not from European backgrounds (Telzer & Fuligni, 2009a). Investigating caregiving youth in samples that span gender, race, and ethnicity, as well as wide ranges of development—for example, middle childhood to late adolescence—can reveal the heterogeneity of risk. In particular, investigating individual differences in the link between caregiving and adaptation can elucidate whether some caregiving youth are more at risk than others, and in turn, reveal currently hidden opportunities to support youth in the context of ongoing calls for justice and equity for all young people.

The Present Study

The present study investigated how children's and adolescents' provision of caregiving to the family is associated with four key domains of development: emotional, social, physical health, and academic adaptation. Specifically, our two objectives were to understand: (a) Is caregiving as a youth associated with emotional challenges, peer difficulties, course grades, and four specific health risk behaviors (diet, sleep, physical activity, and likelihood of having received a medical checkup)? (b) Does the association between caregiving as a youth and developmental outcomes vary according to individual differences in gender, age, and ethnicity?

To answer these questions, we drew on the largest school-based survey to date to assess caregiving youth in the U.S. The sample was characterized by high levels of racial and ethnic diversity and a wide age range spanning from middle childhood to late adolescence. We hypothesized that caregiving as a youth would be associated with more emotional challenges, peer difficulties, health risk behaviors, and lower course grades. We did not have a strong hypothesis for individual differences and that analysis was exploratory.

Method

Participants and Procedure

Our cross-sectional data were drawn from the "Youth Risk Behavior Survey," a school-based survey managed by the Center for Disease Control and administered by the Department of Health in Florida. The survey was administered in the spring of 2019 to 10,880 children and adolescents in public middle and high schools in all but six counties throughout Florida. All students in the participating schools were invited to complete the survey. The sample size was determined in that way. In a classroom setting, youth consented to participate, then responded to the survey online. Respondents had the option to skip items or answer "I don't know."

Our analytic sample used the full sample of 10,880 children and adolescents. Age ranged from 10 to 18 ($M = 14.40$; $SD = 1.97$) from grades 6 to 12, and was 51.52% female ($N = 5,565$). The sample was predominantly Latinx ethnicity (40.33%; including mixed Latinx ethnicity), and White (34.35%), followed by Black which included both African American and Black Caribbean (19.04%), Asian (2.50%), or Other/Mixed Race (3.78%). Socioeconomic status data was not available due to the legal constraints of collecting this information in government-funded school-based surveys, and the potential for breach of participant anonymity. In Florida generally, up to 12.8% of families of four people have household incomes below the poverty line ($25,926; Talk Poverty, 2020), and 26% are considered low-income working families with children (Annie E. Casey Foundation, 2021). The university ethics board declared this study "exempt" because it used only unidentifiable, secondary data. This study was not preregistered. Data and syntax are available upon request. We report how we determined our sample size, all data exclusions (if any), all manipulations, and all measures in the study.

Measures

Provision of Caregiving

A single item assessed youth caregiving: "During an average week, how many days do you provide care for someone in your family or household who is chronically ill (lasts 3 months or more), elderly, or disabled with activities they would have difficulty doing on their own?" Children responded one of five options: "There is no one in my family or home who is chronically ill, elderly, or disabled who needs care"; "0 days per week"; "1 or 2 days per week"; "3 to 5 days per week; "6 or 7 days per week." The first two options were combined into a single category reflecting "no caregiving." Accordingly, the final variable was coded into four categories.

Emotional Challenges

Emotional challenges were indexed via three items: "During the past year, did you ever feel so sad or hopeless almost every day for two weeks or more in a row that you stopped doing some usual activities?"; "During the past year, did you do something to purposely hurt yourself without wanting to die, such as cutting or burning yourself on purpose?"; and "Have you ever seriously thought about killing yourself?" Children responded yes/no to each item. Higher values of *Emotional challenges* reflect higher levels of emotional distress and suicidal ideation ($\alpha = .71$).

Peer Difficulties

Peer difficulties were indexed via seven items. Two items reflected experiences of physical conflict: "During the past year, were you in a physical fight in which you were hurt and had to be treated by a doctor or nurse?" and "During the past year, were you in a physical fight on school property?" Five items reflected the experience of victimization: "Has someone you were dating or going out with ever physically hurt you on purpose?"; "During the past year, have you ever been bullied on school property?"; "During the past year, have you ever been teased, threatened, or had rumors spread about you through e-mail, chat rooms, instant messaging, websites,

or texting?"; "During the past year, have you ever been the victim of teasing or name-calling because of your weight?"; "During the past year, have you ever been the victim of teasing or name-calling because someone thought you were gay, lesbian, or bisexual?" Children responded "yes" or "no" to each item. Higher values of *Peer difficulties* reflect higher levels of physical, verbal, and online interpersonal violence ($\alpha = .67$).

Course Grades

Course grades were indexed via a single item: "During the past 12 months, how would you describe your grades in school?" Children responded to a 7-point scale ranging from "Mostly As" to "Mostly Fs." Children also had the option to respond "Not sure." Higher values of *Course grades* reflect higher grades (i.e., "Mostly As").

Health Risk Behaviors

We measured health risk behaviors as four domains: unbalanced diet, physical inactivity, likelihood of sleeping less than 8 hr per night on an average school night, and likelihood of having not received a medical checkup in the last 12 months. For all health risk behaviors, positive items (i.e., reflecting desirable health behaviors such as eating vegetables) were reverse coded. Accordingly, for all health risk behaviors, higher values reflected higher levels of risk for physical health problems such as cardiovascular risk. All measures were a mean score of the relevant item(s).

For *Unbalanced/Unhealthy Diet*, we used six items which reflected eating behaviors. Specifically, the survey asked how often youth engaged in each behavior during the past 7 days: "On how many days did you eat breakfast?"; "How many times did you eat vegetables?"; "How many times did you eat fruit?"; "How many times did you drink a can, bottle, or glass of soda or pop?"; "How many times did you drink a can, bottle, or glass of a sugar-sweetened beverage?"; "How many days did you eat at fast food restaurants?" Participants responded to a 7-point scale ranging from "I did not do this during the past 7 days" to "4 or more times per day."

For *Physical Inactivity,* we used two items: "During the past 7 days, on how many days were you physically active for a total of at least 60 minutes per day?"; "On an average school day, how many hours do you play video or computer games or use a computer for something that is not school work?" Participants responded by indicating the number of days or hours, respectively.

For *Insufficient Sleep*, we used one item: "On an average school night, how many hours of sleep do you get?" Participants responded on a 7-point scale ranging from "4 hours or less" to "10 hours or more." This measure was then dichotomized as either less than 8 hr per night, or more than 8 hr per night.

For *Health Check-Ups,* we used two items: "During the past year, did you visit a dentist for a check-up?"; "During the past year, did you visit a doctor for a check-up?." Participants responded "Yes," "No," or "Not Sure." These two items were then dichotomized into "Yes" and "No/Not sure."

Demographic Covariates

We controlled for children's self-reported age, gender, and race/ethnicity. Race was categorized into five groups: Black (including African American and Black Caribbean), Asian, Latinx, White non-Latinx, and Mixed/Other Race (e.g., Native American, Mixed Race). There were four dummy coded race/ethnicity variables (e.g., Latinx = 1, not Latinx = 0). White non-Latinx youth served as the reference group. Gender was dichotomous (i.e., Boys = 0 and Girls = 1) and boys served as the reference group.

Statistical Analyses

We used standardized linear regression models which all controlled for children's age, gender, and race/ethnicity. Model 1 tested whether youth caregiving for the family was directly associated with emotional challenges, peer difficulties, course grades, and each health risk behavior. Model 2 tested whether the associations between youths' caregiving and developmental outcomes differed across demographic groups (i.e., gender, age, and ethnicity). Specifically, to test these interactive associations, we created interaction terms by multiplying standardized values of caregiving by each demographic group (i.e., age, gender, and each racial/ethnic group). We then entered these interaction terms into the regression models as simultaneous predictors of each outcome variable (i.e., emotional challenges, peer difficulties, course grades, and each health risk behavior). To probe significant interactions, we used the simple slopes technique to test the association between caregiving and outcomes within each group (e.g., Asian vs. not Asian; Aiken et al., 1991).

To increase the robustness of our findings, we applied Bonferroni correction for multiple testing. Specifically, we divided the significance level (.05) times four (for the four risk domains) to obtain a new significance level (Rosenthal & Rubin, 1984) that was more conservative and adjusted for multiple tests ($p = .013$). Accordingly, for linear regressions, we only present results that fall below this significance threshold. Missing data ranged from 0% to 8.37%. To manage missing data, we used Full-Information Maximum Likelihood (FIML). All analyses were conducted using Stata Software (StataSE, Version 17).

Results

Descriptive Statistics

Approximately 24% of middle school students and 16% of high school students reported that they provide some type of care at least once a week for someone in their family or home who is chronically ill, elderly, or disabled and who needs care. Most students reported that they provide care 1 to 2 days per week (11% in middle school; 8% in high school), followed by 6 to 7 days per week (8% in middle school; 5% in high school), or 3 to 5 days per week (6% in middle school; 4% in high school). This result suggests that 14% of middle school students and 9% of high school students provide care to a family member on a regular basis at least 3 days per week.

Table 1 displays descriptive statistics for the full sample and separated by gender and ethnicity. First, boys provided higher levels of caregiving compared to girls, $t(10, 228) = 2.78$, $p = .006$). Second, a one-way ANOVA indicated that were significant group differences by race/ethnicity, $F(4, 9{,}432) = 9.13$, $p < .001$. Tukey's test for multiple comparison revealed that on average, the mean amount of caregiving was significantly lower among White youth ($M = 0.29$, $SD = 0.75$) compared to Latinx youth ($M = 0.42$,

Table 1
Descriptive Statistics for Study Constructs for the Full Sample, Then Separated by Gender and Ethnicity

Variable	Full sample		Boys		Girls		Asian		Latinx		Black		Mixed/Other race		White non-Latinx		Range	
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*Min*	*Max*
Caregiving	0.36	0.83	0.38^{1}	0.85	0.34^{2}	0.81	$0.32^{A,B}$	0.77	0.42^{A}	0.89	0.38^{A}	0.85	$0.40^{A,B}$	0.89	0.29^{B}	0.75	0	3.00
Age	14.40	1.98	14.42^{1}	1.97	14.38^{1}	1.99	14.22^{A}	2.00	14.35^{B}	2.02	14.61^{C}	1.97	15.48^{C}	1.61	$14.42^{A,C}$	1.94	10.00	18.00
Grade	8.76	1.91	8.74^{1}	1.90	8.78^{1}	1.92	$8.79^{A,B,D}$	1.90	8.65^{A}	1.94	8.97^{B}	1.89	9.91^{C}	1.53	8.80^{D}	1.90	6.00	12.00
Emotional challenges	0.00	1.00	-0.21^{1}	0.85	0.20^{2}	1.08	0.02^{B}	1.00	-0.07^{A}	0.94	0.02^{B}	1.00	0.19^{C}	1.10	$0.00^{A,B}$	1.01	−0.69	2.33
Peer difficulties	0.00	1.00	-0.01^{1}	1.00	0.01^{1}	0.99	-0.17^{A}	1.00	$0.04^{A,B}$	1.01	-0.03^{B}	1.02	$-0.01^{A,B}$	1.00	$0.01^{A,B}$	0.96	−0.73	4.45
Course grades	3.08	0.94	2.93^{1}	0.98	3.22^{2}	0.88	3.56^{A}	0.76	2.97^{B}	0.93	3.02^{B}	0.96	$3.17^{B,C}$	0.90	3.17^{C}	0.93	0.00	4.00
Unbalanced diet	1.07	0.21	1.07^{1}	0.21	1.06^{1}	0.21	$1.03^{A,B}$	0.19	1.10^{B}	0.23	1.06^{C}	0.21	$1.02^{A,B}$	0.21	1.05^{A}	0.20	0.00	2.00
Physical inactivity	1.08	0.36	1.05^{1}	0.37	1.10^{2}	0.34	$1.07^{A,B}$	0.36	1.09^{B}	0.34	1.10^{B}	0.35	$1.08^{A,B}$	0.36	1.05^{A}	0.37	0.00	2.00
Insufficient sleep	0.65	0.48	0.62^{1}	0.49	0.68^{2}	0.47	0.67^{A}	0.47	0.65^{A}	0.48	0.66^{A}	0.47	0.80^{B}	0.40	0.65^{A}	0.48	0.00	1.00
No medical checkup	0.14	0.35	0.17^{1}	0.37	0.12^{2}	0.32	$0.14^{A,B}$	0.35	0.18^{B}	0.38	0.15^{B}	0.36	$0.14^{A,B}$	0.35	0.11^{A}	0.31	0.00	1.00
N	10,880		5,236		5,565		250		1,905		4,034		344		3,436			

Note. Superscripts with different numbers differ significantly ($p < .05$) in the mean values for boys and girls. Superscripts with different letters differ significantly ($p < .05$) in the mean values for youth of different race/ethnicities.

SD = 0.89) and Black youth (*M* = 0.38, *SD* = 0.85). There were no other significant group differences in caregiving by race/ethnicity ($p > .05$).

Bivariate Correlations

Caregiving was correlated negatively with age ($r = -.07$, $p < .001$), and course grades ($r = -.08$, $p < .001$), and positively with emotional challenges ($r = .10$, $p < .001$), peer difficulties ($r = .17$, $p < .001$), and health risk behaviors ($r = .03$, $p < .010$). The Supplemental Materials display the full correlation table.

Caregiving Youth and Developmental Outcomes

Table 2 displays standardized linear regression results for associations between caregiving and emotional challenges, peer difficulties, and academic course grades. Model 1 displays direct associations, whereas Model 2 displays interactive associations with demographic characteristics.

As shown in Model 1, caregiving as a youth was directly associated with higher levels of emotional challenges (β = 0.10, *SE* = 0.01, $p < .001$) and lower course grades (β = −0.08, *SE* = 0.01, $p < .001$). These direct associations were not qualified by any significant interactions with demographic characteristics in Model 2. In addition, caregiving as a youth was directly associated with higher levels of peer difficulties (β = 0.15, *SE* = 0.01, $p < .001$), however, this direct association was qualified by a significant interaction with Asian race/ethnicity in Model 2 (β = 0.20, *SE* = 0.07, $p = .004$). As shown in Figure 1, although the simple slopes for both groups were significant, caregiving was more strongly associated with greater peer difficulties for Asian youth compared to White non-Latinx youth.

Table 3 displays regression results for associations between caregiving and health risk factors: unbalanced/unhealthy diet, physical inactivity, likelihood of experiencing insufficient sleep, and likelihood of not having received a medical checkup. As shown in Model 1, caregiving as a youth was directly associated with a more unbalanced/unhealthy diet (β = 0.01, *SE* = 0.01, $p < .001$), however, this direct association was qualified by a significant interaction with age in Model 2 (β = 0.01, *SE* = 0.01, $p < .001$). Specifically, as shown in Figure 2, caregiving was associated with a more unbalanced/unhealthy diet among older youth but not younger youth. In addition, caregiving as a youth interacted with Black race to predict sleep (β = −0.17, *SE* = 0.06, $p < .005$). Specifically, as shown in Figure 3, caregiving youth were more likely to experience insufficient sleep (i.e., less than 8 hr per night) if they were White non-Latinx, but not if they were Black. There were no other direct or interactive associations when adjusting for multiple tests.

Discussion

Across the U.S., it is increasingly common experience for children and adolescents to be caregivers for a grandparent, parent, or sibling with aging- or illness-related needs. The 5.4 million youth who provide ongoing care for a family member represents almost one-fifth of all young people under age 18, and is more than seven times the number of youths in the foster care system in the U.S. (AARP & National Alliance for Caregiving, 2020; Children's Bureau, 2020). In order to support the developmental needs of

Table 2

Standardized Linear Regressions Testing Associations Between Caregiving Youth and Emotional Challenges, Peer Difficulties and Grades

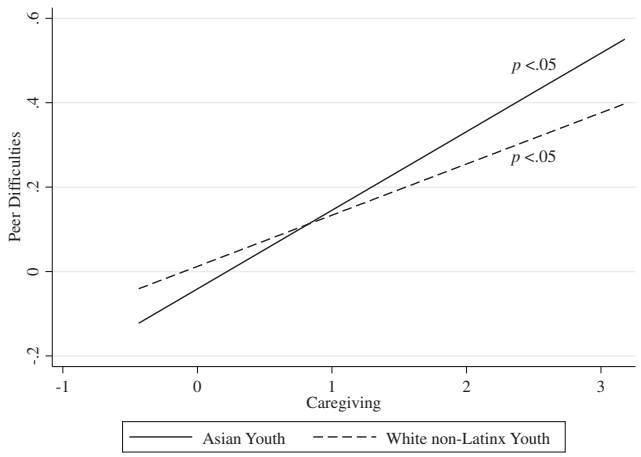
	Emotional challenges				Peer difficulties				Course grades			
	Model 1		Model 2		Model 1		Model 2		Model 1		Model 2	
Variable	β	*SE*	β	*SE*	β	*SE*	β	*SE*	β	*SE*	β	SE
Caregiving provided by youth	0.10*	(0.01)	0.09*	(0.02)	0.15*	(0.01)	0.18*	(0.02)	−0.08*	(0.01)	−0.08*	(0.02)
Age	0.02	(0.01)	0.02	(0.01)	−0.06*	(0.01)	−0.06*	(0.01)	−0.01	(0.01)	−0.01	(0.01)
Female	0.42*	(0.02)	0.42*	(0.02)	0.03	(0.02)	0.03	(0.02)	0.29*	(0.02)	0.29*	(0.02)
Black	−0.08*	(0.03)	−0.08*	(0.03)	0.00	(0.03)	0.01	(0.03)	−0.16*	(0.03)	−0.17*	(0.03)
Asian	0.04	(0.06)	0.04	(0.06)	−0.19*	(0.07)	−0.18*	(0.07)	0.47*	(0.07)	0.46*	(0.07)
Latinx	0.04	(0.02)	0.04	(0.02)	−0.03	(0.02)	−0.03	(0.02)	−0.13*	(0.02)	−0.13*	(0.02)
Other/Mixed race	0.19*	(0.06)	0.19*	(0.06)	0.02	(0.06)	0.02	(0.06)	−0.03	(0.06)	−0.03	(0.06)
Caregiving × Female			−0.00	(0.02)			−0.04	(0.02)			−0.01	(0.02)
Caregiving × Age			0.01	(0.01)			0.02	(0.01)			−0.02	(0.01)
Caregiving × Black			0.00	(0.03)			−0.05	(0.03)			0.03	(0.03)
Caregiving × Asian			0.07	(0.07)			0.20*	(0.07)			−0.11	(0.07)
Caregiving × Latinx			0.05	(0.02)			0.01	(0.02)			−0.02	(0.02)
Caregiving × Other/Mixed race			−0.12	(0.05)			−0.09	(0.05)			−0.02	(0.06)
Constant	−0.23*	(0.02)	−0.23*	(0.02)	−0.01	(0.02)	−0.01	(0.02)	4.18*	(0.02)	4.18*	(0.02)
Observations	10,197		10,197		10,101		10,101		9,070		9,070	
R2	0.056		0.057		0.031		0.033		0.04		0.041	
R2 significance	0.001		0.001		0.001		0.001		0.001		0.001	
Delta R2	—		0.001		—		0.003		—		0.001	
Delta R2 significance	—		0.026		—		0.001		—		0.15	

Note. *P* values are adjusted for multiple tests. Standard errors (*SE*) in parentheses.
* $p < 0.0125$.

all youth via government and institutional policies, research to understand the risks associated with caregiving during childhood and adolescence is imperative (Armstrong-Carter et al., 2021). Accordingly, this study sought to understand whether caregiving youth face heightened risk for negative emotional, social, academic, and physical health outcomes, compared to their noncaregiving peers. Further, we examined whether the associations between caregiving as a youth and developmental outcomes varied according to individual differences in gender, age, and race/ethnicity. Our consistent pattern of results illustrates that caregiving for family member(s) during childhood and adolescents is associated in a linear fashion with developmental risk across the emotional, social, and academic domains. Additional physical health behavioral risks emerged for older youth and White non-Latinx youth. Without sufficient support from school and social service policies, caregiving youth may be at heightened risk for significant emotional, social, academic, and physical health challenges.

Figure 1

Providing Care to Family Member(s) Is Associated More Strongly With Peer Difficulties Among Children From Asian Backgrounds Compared to Children From White Non-Latinx Backgrounds



Caregiving Youth Face Heightened Developmental Risk

Our primary finding was that children and adolescents who provided caregiving for a loved one in the home more frequently (i.e., on more days during the week) reported more emotional challenges, social difficulties with peers, and lower course grades compared to their peers. Specifically, more frequent caregiving was associated with higher levels of emotional challenges (e.g., suicidality, hopelessness, self-harm), peer difficulties (e.g., conflict with peers including both externalizing behaviors and experiences of victimization), and lower academic course grades. In addition, older caregiving youth (i.e., adolescents) reported consuming a more unbalanced and less healthy diet including more fast food and sugary beverages, fewer vegetables and fruit, less frequent breakfasts, compared to their peers. This was not the case for younger caregiving youth. Moreover, caregiving youth from White non-Latinx backgrounds were more likely to experience insufficient sleep (i.e., less than 8 hr per night) compared to Black caregiving youth.

Our results corroborate prior qualitative and smaller quantitative studies, which suggested that caregiving youth are more likely to experience depression, anxiety, and academic difficulties compared to their noncaregiving peers (for a review, see Kavanaugh et al., 2016). We build on prior work by integrating multiple domains of

Table 3

Standardized Linear Regressions Testing Associations Between Caregiving Youth and Physical Health

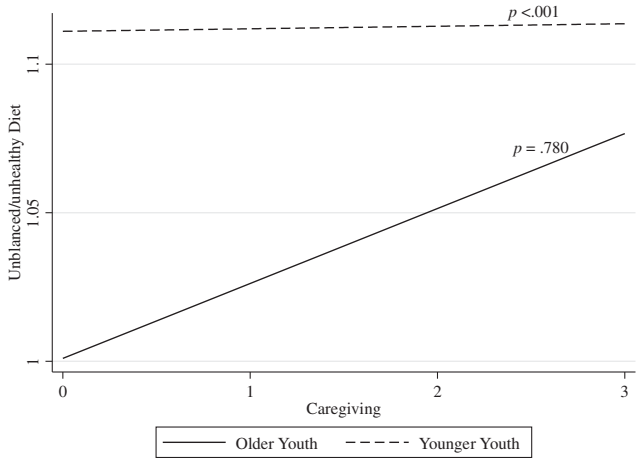
	Unbalanced diet				Physical inactivity				Insufficient sleep				No medical checkup			
	Model 1		Model 2		Model 1		Model 2		Model 1		Model 2		Model 1		Model 2	
Variable	β	*SE*	β	*SE*	β	*SE*	β	*SE*	β	*SE*	β	*SE*	β	*SE*	β	*SE*
Caregiving provided by youth	0.04*	(0.01)	0.03	(0.02)	0.01	(0.01)	0.02	(0.02)	0.00	(0.00)	0.00	(0.01)	0.01	(0.00)	0.01	(0.01)
Age	−0.24*	(0.01)	−0.24*	(0.01)	0.12*	(0.01)	0.12*	(0.01)	0.16*	(0.00)	0.16*	(0.00)	0.01*	(0.00)	0.01*	(0.00)
Female	−0.03	(0.02)	−0.03	(0.02)	0.13*	(0.02)	0.13*	(0.02)	0.06*	(0.01)	0.06*	(0.01)	−0.05*	(0.01)	−0.05*	(0.01)
Black	0.22*	(0.03)	0.22*	(0.03)	0.09*	(0.03)	0.09*	(0.03)	0.02	(0.01)	0.02	(0.01)	0.04*	(0.01)	0.04*	(0.01)
Asian	−0.11	(0.06)	−0.11	(0.06)	0.05	(0.07)	0.05	(0.07)	0.04	(0.03)	0.05	(0.03)	−0.01	(0.02)	−0.01	(0.02)
Latinx	0.07*	(0.02)	0.07*	(0.02)	0.08*	(0.02)	0.08*	(0.02)	−0.00	(0.01)	−0.00	(0.01)	0.00	(0.01)	0.00	(0.01)
Other/Mixed race	−0.04	(0.06)	−0.03	(0.05)	0.03	(0.06)	0.03	(0.06)	0.06	(0.03)	0.06	(0.03)	−0.00	(0.02)	−0.00	(0.02)
Caregiving × Female			−0.00	(0.02)			0.01	(0.02)			0.01	(0.01)			0.00	(0.01)
Caregiving × Age			0.05*	(0.01)			0.00	(0.01)			−0.00	(0.00)			0.00	(0.00)
Caregiving × Black			0.06	(0.03)			−0.01	(0.03)			−0.04*	(0.01)			−0.01	(0.01)
Caregiving × Asian			0.16	(0.07)			0.04	(0.07)			0.03	(0.03)			0.00	(0.02)
Caregiving × Latinx			0.03	(0.02)			−0.03	(0.02)			−0.01	(0.01)			−0.01	(0.01)
Caregiving × Other/Mixed race			−0.05	(0.05)			−0.04	(0.06)			0.03	(0.03)			0.00	(0.02)
Constant	−0.03	(0.02)	−0.03	(0.02)	−0.11*	(0.02)	−0.11*	(0.02)	0.61*	(0.01)	0.61*	(0.01)	0.15*	(0.01)	0.15*	(0.01)
Observations	10,099		10,099		10,032		10,032		9,931		9,931		9,870		9,870	
R2	.071		.074		.021		.021		.111		.111		.007		.007	
R2 significance	.001		.001		.001		.001		.001		.001		.001		.001	
Delta R2	—		.004		—		.000		—		.001		—		.000	
Delta R2 significance	—		.001		—		.835		—		.015		—		.927	

Note. *P* values are adjusted for multiple tests. Standard errors (*SE*) in parentheses.

* $p < 0.0125$.

Figure 2

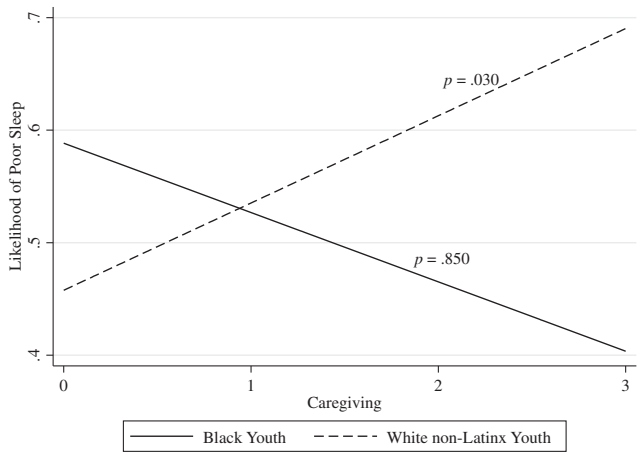
Providing Care to Family Member(s) Is Associated With an Unbalanced/Unhealthy Diet Among Older Youth (i.e., Adolescents or High Schoolers) but Not Among Relatively Younger Children (i.e., Middle Schoolers)



developmental outcomes into a larger sample that is more diverse by race, ethnicity, and age. Caregiving is challenging even in the best of circumstances among adults (Del-Pino-Casado et al., 2018). Caregiving for family members during childhood and adolescence may be emotionally challenging for several reasons. First, in family environments where children and adolescents serve as caregivers, familial hierarchies and interpersonal borders can be blurred and diffused. These family dynamics can have consequences for youths' development; for instance, children may be viewed as self-sufficient or relatively grown up for their age, take on a "parentified" role, and not have the emotional or material supports afforded to their peers. In this way, the structural family subsystem can influence caregiving youths' development (Minuchin, 2018). In addition, many youth lack informational or material resources needed to care for their loved one effectively, which could contribute to a sense of frustration and inefficacy (Cohen et al., 2012). Second, youth may also feel isolated or unsupported, as caregiving youth been historically unacknowledged and misunderstood (Olson, 2019), and school and medical systems in the U.S. do not formally recognize or support caregiving youth (Armstrong-Carter et al., 2021). Third, negative outcomes may result when youth's caregiving tasks conflict with other developmentally appropriate activities, including completing school assignments and attendance, participating in physical exercise, accessing healthful and balanced meals, spending time resting or coping with the day's challenges, or spending time with peers (Siskowski, 2006). Finally, caregiving youth with greater time burdens or more complex care tasks are likely to live in households with low socioeconomic status, where material and formal supports are not as readily available to support care needs (Hunt et al., 2005). Caregiving may be burdensome if children receive insufficient emotional, social, and material supports (Hooper et al., 2014).

Figure 3

Providing Care to Family Member(s) Is Associated With Greater Likelihood of Experiencing Insufficient Sleep Among White Non-Latinx Youth but Not Among Black Youth



Consistent with our finding that caregiving youth experience higher levels of peer difficulties, adult caregivers often feel that they lack a strong feeling of social support as indicated in a recent meta-analysis (Del-Pino-Casado et al., 2018). Since caregiving is associated with feelings of sadness and hopelessness in our study, these challenging emotions may make it difficult for caregiving youth to engage positively with their peers, and contribute to conflict with peers. Caregiving may be associated with peer difficulties particularly strongly if caregiving detracts time from socializing with peers who can provide social and emotional support that enable children to express their feelings, share experiences, access social support, and feel a sense of community belonging (Shifren, 2009; Siskowski, 2006). Future research should investigate some of these potential mechanisms through which caregiving comes to be associated with social adjustment.

Individual Differences in the Link Between Caregiving and Risk

In our study, boys reported caregiving significantly more frequently compared to girls. This finding contrast those from a nationally representative study in 2005, in which boys and girls were equally likely to provide care via all but one of 14 caregiving activities (Hunt et al., 2005). The one exception in that prior study was that girls were twice as likely as boys to arrange for outside help compared to boys (Hunt et al., 2005). Our findings are consistent with recent evidence among adults showing that men provide more care than has been traditionally recognized (Mott et al., 2019). In this way, our findings contrast gendered stereotypes of girls as caregivers (Mott et al., 2019). Future research should replicate our finding in other settings and further investigate why boys might identify as providing caregiving more frequently than girls. It is possible that boys are more likely to recognize their helping behaviors in the home as caregiving given that girls have been more socialized traditionally into caregiving roles (Mott et al., 2019). In addition, caregiving youth may be also younger than commonly acknowledged or believed; in our study younger youth also (e.g., those in middle childhood) provided more caregiving compared to older youth (e.g., those in adolescence).

We also found that Latinx and Black children and adolescents provided significantly more frequent caregiving to family compared

to youth from White or Asian ethnicities. This finding is consistent with the historic and ongoing systemic inequities and discrimination that Black and Latinx youth face, including institutional barriers to social services, supports, and opportunities (Syed et al., 2018). In addition, three significant individual differences emerged in our primary analyses. First, caregiving youth who were Asian experienced greater social problems compared to caregiving youth from White non-Latinx backgrounds. Caregiving could be particularly taxing for Asian youth if caregiving is expected, ongoing, or time-consuming due to strong emphasis on family values in many Asian homes (Keller, 2020). Asian youth who are providing frequent, ongoing care may be particularly likely to not socialize or socialize less with peers in the context of conflicting family, social, and academic demands due to cultural emphasis on the importance of family and reciprocal care (Keller, 2020). Consistent with our findings, one prior study found that Chinese American adolescents were less likely to socialize with peers on days when they had a high number of family obligations and spent more time on family obligations (Fuligni et al., 2002). Second, we found that caregiving was associated with a more unbalanced/unhealthy diet among older caregiving youth (i.e., caregiving adolescents), but not among younger caregiving youth. Relatively older caregiving youth may have additional responsibilities which serve as barriers to engaging in healthy eating routines when compounded by caregiving tasks. For instance, adolescents and older children have more homework and are more likely to work outside the home for supplemental income (Bridgeland et al., 2006), and so they may have less time for healthful, balanced meal preparation when they also juggle caregiving. In addition, adolescents and older children may eat more frequently outside the home with friends or alone at fast-food restaurants with relatively fewer fresh fruits and vegetables, compared to younger youth (French et al., 2001). In contrast, young children re more reliant on family routines in the home may be still perceived as needing structure and scaffolding for their meal times and nutrition (French et al., 2001), even if they are simultaneously providing reciprocal care. This could partially explain why caregiving adolescents may disproportionately face barriers to healthy eating if they are taking on the primary caregiving role in the home.

Third, we found that caregiving youth who identified as White non-Latinx were more likely to report sleeping less than 8 hr on the average school night, compared to caregiving youth who identified as Black. Less than 8 hr of sleep is insufficient and is a risk factor for emotional, social, academic, and physical health challenges (Becker et al., 2015). One reason for the difference between White and Black caregiving youths' experiences of sleep could be that Black youth across the population already on average experience less sleep and more fragmented sleep (e.g., Matthews et al., 2014). This is particularly the case due to historic and ongoing systemic inequalities and barriers that have concentrated Black youth in urban areas with high levels of noise and light pollution that contribute to sleep deprivation (Yip, Cheon, et al., 2020). In addition, experiences of racial and ethnic discrimination detract from sleep time and quality (Yip, Cham, et al., 2020). If Black youth on average already experience poor sleep due to neighborhood environments caused by societal inequalities, then caregiving may be relatively less impactful for them compared to White non-Latinx youth who on average live in quieter and more privileged neighborhoods. White non-Latinx youth who are caregivers may sleep less compared to those who are not caregivers due to heightened worries, stress, and time spent on caregiving. Consistent with our findings, prior research has suggested that family structure and integration (e.g., living with extended relatives such as grandparents) are not strongly associated with Black youths' development (Cross, 2021), reflecting both the resilience and the adversity faced by Black youth in the U.S.

Despite these three individual differences, our results overall suggest that caregiving is associated with similar levels of risk across *most* demographic groups. Specifically, caregiving was associated with comparable levels of risk for both boys and girls; for younger and older children (for all types of risk except diet); and for Latinx, Black, and Mixed/other race youth compared to White non-Latinx youth. Consistent with other research which has suggested that helping the family in moderate amounts is associated with similar outcomes across individual differences in gender, age, and ethnicity (Armstrong-Carter et al., 2020; Telzer & Fuligni, 2009b), our findings suggest that caregiving is consistently associated with risk across a diverse set of boys and girls from middle childhood to late teenage years.

Limitations and Future Directions

We acknowledge several limitations in our study. First, we measured caregiving with a single item. It is not known which family member needs care (e.g., sibling, parent, grandparent), what type of disability or illness the care recipient experiences (e.g., mental, cognitive, physical), the severity of the care recipient's condition (e.g., relative mobility; acute vs. chronic illness; degenerative or terminal illness). Since our item to assess caregiving focuses on care for individuals who are chronically ill (3 months or more), elderly, or disabled, it may not capture full variability in caregiving for a sibling. It also focuses on youths' provision of instrumental care rather than emotional support. Further, it is unclear from our study which types of care the child or adolescent provided (e.g., chores such as laundry and meal prep, helping the person sit up or walk, bringing the person things, helping to bathe the person, feeding the person, administering of medication, therapy, or wound care, driving to doctor appointments or picking up prescriptions), or for how long the child or adolescent has been providing the care (a few weeks, a few months, a few years). All these factors may influence the extent to which caregiving as a child or adolescent is associated with developmental outcomes and should be investigated in future research. In addition, future research should explore whether children's and adolescents' provision of caregiving to the family differentially impacts developmental outcomes depending on the family structures and relationships (e.g., extended family households vs. two-parent vs. single parent).

Second, our study used self-report measures which provided unique insight into youths' lived subjective experiences and perceptions. These measures attempted to minimize self-report bias by providing more specific, objective response options (e.g., "how many times per week do you provide care?" instead of, e.g., "do you *often* provide care?"). However, our results could be impacted by shared-method bias. Future research will benefit from using daily diary approaches in samples of caregiving youth or other more objective measurements (e.g., actigraphy or participatory mapping to understand physical movement). Third, youth may have difficulty identifying their help as caregiving. Sitting with an aged family member or sleeping in the room of a person with a disability to provide aid during the night may not be interpreted by young people

as providing care for someone. This is especially true in the context of the U.S., where caregiving youth are not recognized in policy, education, or youth services, and are therefore less likely to recognize some forms of family help as caregiving (Leu & Becker, 2017). Greater reliability of U.S. caregiving youth might be achieved by a more comprehensive approach, such as The Longitudinal Study of Australian Children, which uses a series of questions to better help youth self-identify as having caregiving responsibilities (Warren & Edwards, 2017). Fourth, while our study paints a representative picture of the caregiving youth in Florida—the state which is home to the second-largest population of people ages 65 years and older in the U.S.—future studies should clarify whether our results are generalizable across other contexts in the U.S. which differ by culture, socioeconomic context, and population density. For example, caregiving youth in highly rural areas may face additional challenges due to inaccessibility of services such as fewer medical and psychological facilities, further distances to schools and peers' homes, and limited public transport (Miller & Votruba-Drzal, 2015).

Finally, we were unable to control for family socioeconomic or immigration status due to the legal constraints of collecting this information from large, government-funded school-based surveys. Therefore, our results may be confounded in part by socioeconomic status and immigration experiences. For instance, caregiving youth likely come from families with lower socioeconomic status and face additional emotional, social, physical, and academic challenges due to limited resources, supports, and educational opportunities, as well as broad social exclusion and discrimination. Further, families that include undocumented adults or children may be denied access to existing institutional resources or resources to supplement in-home help. Caregiving youth who are from undocumented families may also feel less comfortable participating or self-identifying, out of fear of exposing their immigration status. Future research should investigate the extent to which controlling for family socioeconomic and immigration status reduces our observed estimates.

Conclusion

Understanding variability in childhood family environments is crucial for addressing inequities and promoting mental and physical health across the life course (Cox & Paley, 2003). Across developmental psychology, there is emergent recognition of the importance of considering children's development in contexts of greater variability in household structure, extended family units, and family support networks (Cross, 2018). Traditional psychological research often focuses on nuclear family units which can contribute to a "one size fits all" understanding of children's development. However, many U.S. families live in extended family homes where "traditional" roles of caregiving evolve in response to changing conditions in communities across the nation (Cross, 2018).

In this study, we examined a unique but increasingly common experience among children and adolescents—that is, experiences caregiving for a parent, grandparent, sibling, or other loved one in the home who requires significant, ongoing support for daily life due to chronic illness or aging. Capitalizing on the largest school-based survey to date, we provide robust correlational evidence that the frequency and intensity of caregiving as a youth is related to higher levels of developmental risk across social, emotional, physical, and academic domains. These concerning results highlight a need to support caregiving youth and their families via policies and institutional supports. For example, schools may be able to provide additional resources and accommodations for students who are caregiving at home (Armstrong-Carter et al., 2021). National and regional caregiving services could also be extended to include young people under age 18, which could help to mitigate financial challenges and reduce negative impacts on development (Armstrong-Carter et al., 2021). More research is imperative to understand the experiences of caregiving youth, enable them to achieve their developmental potential, and mitigate inequalities between children.

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