

# Childhood Family Connection and Adult Flourishing: Associations Across Levels of Childhood Adversity

Robert C. Whitaker, MD, MPH; Tracy Dearth-Wesley, PhD, MPH;  
Allison N. Herman, MEd, MPH

From the Columbia-Bassett Program, Vagelos College of Physicians and Surgeons, Columbia University (RC Whitaker, T Dearth-Wesley, and AN Herman), New York, NY; Columbia-Bassett Program, Bassett Medical Center (RC Whitaker, T Dearth-Wesley, and AN Herman), Cooperstown, NY; Bassett Research Institute, Bassett Medical Center (RC Whitaker, T Dearth-Wesley, and AN Herman), Cooperstown, NY; and Department of Pediatrics, Vagelos College of Physicians and Surgeons, Columbia University (RC Whitaker), New York, NY. The authors have no conflicts of interest to disclose. Address correspondence to Robert C. Whitaker, MD, MPH, Bassett Medical Center, One Atwell Road, Cooperstown, NY 13326 (e-mail: [robert.whitaker@bassett.org](mailto:robert.whitaker@bassett.org)).

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## ABSTRACT

**OBJECTIVE:** To investigate whether higher levels of childhood family connection were associated with greater adult flourishing and if this association was present across levels of adverse childhood experiences (ACEs) and childhood socioeconomic disadvantage (SED).

**METHODS:** We pooled cross-sectional data from telephone and mailed surveys in the Midlife in the United States study that were collected from 2 nationally representative cohorts (2004–06 and 2011–14) of English-speaking, US adults, aged 25 to 74 years. Adult flourishing  $z$  score, standardized to the study population, was created from Ryff's 42-item Psychological Well-being Scale and quartiles of childhood family connection from a 7-item scale assessing parental attention, affection, and communication during childhood.

**RESULTS:** Data were analyzed for the 4199 (72.0% of 5834) participants with complete data. The mean age of participants was 53.9 years and 85.4% were White. After adjusting for covariates, including adult chronic disease, ACEs, and childhood and

current SED, mean (95% CI) flourishing  $z$  scores increased from the lowest to highest quartiles of family connection:  $-0.41$  ( $-0.49, -0.33$ ),  $-0.18$  ( $-0.25, -0.12$ ),  $-0.01$  ( $-0.07, 0.06$ ), and  $0.25$  ( $0.18, 0.32$ ), respectively. For each 1 SD increase in the family connection score, there was a  $0.25$  (95% CI,  $0.20, 0.29$ ) unit increase in the adjusted flourishing  $z$  score. This positive association was also present across levels of ACEs and childhood SED.

**CONCLUSIONS:** Greater childhood family connection was associated with greater flourishing in US adults across levels of childhood adversity. Supporting family connection in childhood may influence flourishing decades later, even with early adversity.

**KEYWORDS:** adverse childhood experiences; human development; parent-child relations

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## WHAT'S NEW

In a national sample of US adults, after adjusting for covariates, including adult socioeconomic disadvantage and chronic disease, there was a positive association of childhood family connection with adult flourishing; this association was present across levels of childhood adversity.

BOTH THE WORLD Health Organization<sup>1</sup> and the Centers for Disease Control and Prevention<sup>2</sup> have endorsed interventions that help children experience safe, stable, and nurturing relationships with their parents and caregivers. When exposed to this type of family connection, children receive the support, protection, predictability, attention, and affection that allow them to reach their developmental potential, not just avoid harm, even when faced with some adversity.<sup>3</sup> Despite the expectation that family connection in childhood is associated with positive outcomes in adulthood, empirical support for this association is limited.

Instead, existing research largely documents that childhood family connection prevents poor outcomes—poor physical and mental health, high-risk behaviors, poor social and emotional functioning, or low academic achievement, particularly after adversity.<sup>4,5</sup> This important body of research on the concept of resilience, which is central to pediatric care,<sup>6</sup> rarely examines outcomes in midlife or beyond and is often framed as surviving childhood adversities rather thriving in spite them.

Eudaimonic well-being, which we here call flourishing, refers to positive mental functioning reflected in the pursuit of self-realization, or the ongoing process of knowing and using one's unique abilities.<sup>7,8</sup> Integrating scholarship in humanistic, existential, developmental, and clinical psychology, Ryff characterized 6 dimensions of adult flourishing: purpose in life, self-acceptance, positive relations with others, personal growth, environmental mastery, and autonomy.<sup>9</sup> Conceptualized in this way, flourishing can occur in the setting of chronic health conditions,<sup>10–12</sup> and does not require or exclude having positive emotions or life

satisfaction, which are core constructs in the hedonic framework of well-being.<sup>13,14</sup> Therefore, this flourishing or eudaimonic framework of well-being is the one most compatible with the inevitable experience of potentially traumatic events or circumstances across the life course, including during childhood.<sup>15</sup>

To our knowledge, 6 studies have shown a positive association between childhood family connection and adult flourishing,<sup>16–21</sup> but none examined whether this association was present across groups with differing levels of childhood adversity. We use the term family connection to describe experiences of attention, affection, and communication from parents or adult caregivers that would be expected to create feelings of trust, safety, stability, and nurturance. Adult flourishing may be less frequent after childhood adversity,<sup>20</sup> but childhood adversity is common, not easily prevented, and does not preclude family connection. Childhood family connection may be associated with adult flourishing, even in the face of adversity, but to our knowledge this has only been evaluated in one study. Among young adults with type 1 diabetes, we showed that the positive association between childhood family connection and adult flourishing was present in those with different levels of adverse childhood experiences (ACEs) and childhood social position.<sup>12</sup> In this study, we attempt to extend those findings. Using data from a nationally representative sample of US adults, we determined whether there was a positive association between childhood family connection and adult flourishing and whether this association was present across levels of ACEs and childhood socioeconomic disadvantage (SED).

## METHODS

### STUDY POPULATION AND DATA

To address our study questions, we used survey data from the ongoing Midlife in the United States (MIDUS) study.<sup>22</sup> We pooled data from 2 MIDUS cohorts, each of which was assembled from a random-digit-dialing sampling of noninstitutionalized, English-speaking adults, aged 25 to 74 years, living in the contiguous United States. Data were collected first by phone interview and then by mailed self-administered questionnaire (SAQ); the same survey items were used with both cohorts. The first cohort (N = 2257) was surveyed in 2004–06 (MIDUS 2, M2), and the second cohort (N = 3577) in 2011–14 (MIDUS Refresher, MR1). For this cross-sectional analysis we combined data from both cohorts (N = 5834). Our analyses of these de-identified, publicly available data from the 2 MIDUS cohorts did not require institutional review board approval.

### MEASURES

#### PRIMARY EXPOSURE: CHILDHOOD FAMILY CONNECTION

Childhood family connection was measured with a score developed from 7 items (eTable 1).<sup>23</sup> The items were asked separately about each parent, with the participant recalling for these items “the mother/father (or the

woman/man who raised you) during the years you were growing up.” The first item asked, “How would you rate your relationship with your mother/father?” The 5 rating options ranged from excellent (1) to poor (5). The 6 remaining items addressed parental attention, affection, and communication; for these items, the 4 rating options ranged from a lot (1) to not at all (4).

Item scores were recoded so that higher scores reflected greater levels of connection. Following others,<sup>20</sup> the first item score (range 1–5) was multiplied by 0.75 to align with the other 6 items (range 1–4). Separate maternal and paternal connection scores were then calculated as the mean score of the 7 items. We created a raw childhood family connection score (range 1–4) by averaging the maternal and paternal connection scores.<sup>17,20,21</sup> The internal consistency (Cronbach’s alpha) of the childhood family connection score was .93.

#### PRIMARY OUTCOME: ADULT FLOURISHING

We created a flourishing score based on the 42-item version of Ryff’s Psychological Well-being Scale,<sup>7</sup> widely used to measure eudaimonic well-being.<sup>13,14</sup> The scale has 7 items for each of the 6 subconstructs of flourishing (eTable 2). Respondents rated items on a Likert-type scale, ranging from strongly agree (1) to strongly disagree (7). Positively worded items were reverse-coded so that higher scores indicated greater flourishing. A raw flourishing score was calculated by summing across the 42 items, and the internal consistency (Cronbach’s alpha) of the score was .94.

#### MEASURES OF CHILDHOOD ADVERSITY

Using items available in MIDUS that were worded similarly to items used in the Centers for Disease Control and Prevention’s Behavioral Risk Factor Surveillance System’s ACE Module (eTable 3), we determined participants’ exposure before 18 years of age to 5 categories of ACEs related to abuse (emotional, physical, and sexual) and household challenges (household substance abuse and parental divorce or separation). The ACE score was created by counting the number of categories of exposure (range 0 to 5).

We created a childhood SED score using retrospective reports of welfare receipt and duration, financial status relative to others, and parental education.<sup>24</sup> Respondents were asked whether their family was ever on welfare (excluding health insurance or unemployment benefits) for a period of 6 months or longer during their childhood or adolescence (Yes/No) and, if yes, whether that assistance was during “all, most, some, or only a little” of their childhood and adolescence. Responses were combined and coded as: no (0); yes, some or only a little (1); and yes, all or most (2). Respondents were asked on a scale whether their family was better or worse off financially than the average family at that time. Responses were recoded as: a lot better off, somewhat better off, or a little better off (0); same as the average family (1); and a little worse off, somewhat worse off, or a lot worse off (2). Separate questions were asked about the highest level of education for each parent, and responses were combined and coded as:

some college or higher for at least one parent (0), high school graduate or General Educational Development test for at least one parent (1), and less than high school for both parents (2). We summed scores across the 3 derived variables to create the childhood SED score, with higher scores (range 0–6) reflecting greater childhood SED.

#### ADDITIONAL COVARIATES

Participants reported their age, gender, race (White, Black, other), and marital status. We created a current SED score from 4 variables, one pertaining to the participant's educational attainment and 3 to their current financial situation.<sup>24</sup> Highest level of education was coded as: bachelor's degree or higher (0); some college or an associate's degree (1); and high school graduate, General Educational Development test, or less (2). Participants ranked their perceived financial situation on a scale of 0 to 10 from "the worst possible financial situation" (0) to "the best possible financial situation" (10). We recoded responses as: 8 to 10 (0), 4 to 7 (1), and 0 to 3 (2). Participants were asked whether they generally had enough money to meet their needs, and responses were coded as: more money than you need (0), just enough money (1), and not enough money (2). Finally, participants were asked about their difficulty paying monthly bills, and responses were coded as: not at all difficult (0), not very difficult (1), and somewhat or very difficult (2). We summed scores across the 4 items to create the current SED score, with higher scores (range 0–8) reflecting greater current socioeconomic disadvantage. Finally, we created a current chronic disease score using questions about medical conditions and treatments that reflected diagnosed diseases with current symptoms and/or treatments (eTable 4). Nine disease categories were created. One point was assigned for having a disease in a given category, and a summary score was created (range 0–9).

#### STATISTICAL ANALYSIS

Because our analyses required data collected from both the phone interview and SAQ, we first restricted our analysis to the 4346 (74.5% of 5834) participants who completed both instruments. An additional 147 participants were excluded because they were missing items needed to construct 1 or more of the 4 key study variables (childhood family connection, adult flourishing, ACEs, and childhood SED), leaving 4199 (72.0%) for analysis. We applied the poststratification weights developed by the MIDUS research team for participants who returned the SAQ. The application of these weights aligned the distribution of the SAQ respondents with the Current Population Survey of the US Census Bureau in terms of gender, race, age, education, and marital status. To facilitate clinical interpretation of our findings, we converted the raw family connection and flourishing scores to *z* scores by standardizing the raw scores to the study sample. Throughout, we used a significance threshold of  $P < .05$  from 2-sided testing.

Using *t* tests and one-way analysis of variance we examined the bivariate associations between flourishing *z*

scores and levels of the covariates. To examine the covariate-adjusted association between family connection and flourishing, multivariable linear regression was used with flourishing *z* score as the dependent variable, family connection *z* score as the key independent variable, and 8 covariates (age [continuous], gender, race, marital status, and the scores [continuous] for current chronic disease, current SED, childhood SED, and ACEs). These covariates were considered possible cofounders of the association between childhood family connection and adult flourishing. Analysis of the standardized residuals from this model suggested no evidence of a nonlinear association between family connection and flourishing. We also examined family connection as a categorical variable, using weighted quartiles of family connection *z* scores. Regression-based margins, standardized to the distribution of covariates in the study population, were used to estimate adjusted mean flourishing *z* scores for each quartile of family connection. Finally, the associations between family connection and flourishing were examined separately by levels of ACE score and childhood SED score.

## RESULTS

Of the 4199 included in the analysis, 54.0% were female, 85.4% were White, and the mean (SD) age was 53.9 (13.8) years (Table 1). Compared to those not included in our analysis ( $n = 1635$ ), those included ( $n = 4199$ ) were older, more educated, and more likely to be female or married (eTable 5).

The mean (SD) of the raw flourishing score was 228.6 (35.4) (eTable 6). Flourishing was significantly associated with all 8 covariates except gender, being significantly lower for those who were younger, divorced or separated, had higher ACE scores, had higher childhood or current SED scores, or greater chronic disease burden (Table 1).

After adjusting for all 8 covariates, including ACE and childhood SED scores, mean (95% CI) flourishing *z* scores increased from the lowest to highest quartiles of childhood family connection:  $-0.41$  ( $-0.49, -0.33$ ),  $-0.18$  ( $-0.25, -0.12$ ),  $-0.01$  ( $-0.07, 0.06$ ), and  $0.25$  ( $0.18, 0.32$ ), respectively (Table 2). Compared to those in the lowest quartile of family connection, the adjusted flourishing *z* scores were 0.66 (95% CI, 0.55, 0.78) units higher among those in the highest quartile. For each 1 SD increase in the family connection score, there was a 0.25 (95% CI, 0.20, 0.29) unit increase in the adjusted flourishing *z* score. This finding did not differ significantly when data for each cohort were examined separately ( $F(1,4133) = 1.07, P = .30$  for the interaction term [cohort  $\times$  family connection score] in the full regression model).

Within the subgroups determined by level of exposure to ACEs or childhood SED, there were also significant, graded associations between childhood family connection and flourishing (Figure and eTable 7). However, in the subgroups with the highest level of exposure to ACEs (3 to 5) or childhood SED (score 4 to 6), the relationships between family connection and adult flourishing were

**Table 1.** Participant Characteristics and Their Association With Adult Flourishing

Characteristic	No. (%) in Category*	Flourishing z Score <sup>†</sup>	
		Mean (95% CI)	P Value
All	4199 (100.0)	0 (–)	–
Age, years <sup>‡</sup>			<.001
<30	126 (4.5)	–0.16 (–0.33, 0.01)	
30–39	625 (17.5)	–0.07 (–0.15, 0.01)	
40–49	856 (23.8)	–0.11 (–0.18, –0.05)	
50–59	974 (24.6)	–0.07 (–0.13, –0.01)	
60–69	977 (18.2)	0.18 (0.12, 0.24)	
≥70	641 (11.4)	0.08 (0.01, 0.16)	
Gender			.627
Female	2260 (54.0)	–0.01 (–0.05, 0.03)	
Male	1939 (46.0)	0.01 (–0.04, 0.05)	
Race <sup>§</sup>			.022
White	3627 (85.4)	0.00 (–0.03, 0.04)	
Black	236 (6.6)	0.11 (–0.02, 0.24)	
Other	312 (7.9)	–0.12 (–0.23, –0.01)	
Marital status			<.001
Married	2791 (66.2)	0.08 (0.04, 0.12)	
Divorced or separated	651 (15.3)	–0.14 (–0.22, –0.07)	
Never married	461 (13.0)	–0.30 (–0.39, –0.20)	
Widowed	287 (5.5)	0.00 (–0.11, 0.12)	
Current chronic disease score <sup>  </sup>			<.001
0	1328 (32.5)	0.12 (0.06, 0.17)	
1	1169 (27.6)	0.06 (0.00, 0.12)	
2	812 (19.0)	–0.02 (–0.09, 0.04)	
3	518 (12.2)	–0.15 (–0.23, –0.06)	
4–9	372 (8.7)	–0.34 (–0.44, –0.24)	
Current socioeconomic disadvantage score <sup>¶</sup>			<.001
0–1	793 (13.8)	0.45 (0.38, 0.52)	
2–3	1219 (25.5)	0.16 (0.10, 0.21)	
4–5	1247 (31.4)	–0.04 (–0.10, 0.01)	
6–8	907 (29.3)	–0.53 (–0.59, –0.46)	
Adverse childhood experiences score <sup>#</sup>			<.001
0	1895 (42.9)	0.14 (0.10, 0.19)	
1	1096 (26.3)	–0.01 (–0.07, 0.05)	
2	743 (18.1)	–0.19 (–0.26, –0.12)	
3–5	465 (12.7)	–0.26 (–0.36, –0.18)	
Childhood socioeconomic disadvantage score <sup>**</sup>			<.001
0	823 (17.9)	0.16 (0.09, 0.23)	
1	976 (21.9)	0.06 (0.00, 0.13)	
2	1120 (27.6)	–0.07 (–0.13, –0.01)	
3	806 (20.3)	–0.08 (–0.14, –0.01)	
4–6	474 (12.2)	–0.12 (–0.21, –0.03)	

CI indicates confidence interval; MIDUS, Midlife in the United States study.

\*No. (%) = unweighted n and weighted percentages of sample. Percentages may not add to 100 due to rounding. Participants were missing data on as follows: race (24 cases), marital status (9 cases), and current socioeconomic disadvantage score (33 cases).

†Means are unweighted. P value is for t test or one-way analysis of variance assessing how the flourishing z score was related to levels of a participant characteristic.

‡The combined sample mean (SD) = 53.9 (13.8) years.

§Among those who reported on their race, 162 (4.0%) identified as having Hispanic ethnicity. Within each race group, the number (weighted percentage) of participants who identified as having Hispanic ethnicity was 75 (1.9%) for White, 5 (1.4%) for Black, and 82 (28.9%) for other.

||Score based on having a disease in 0–9 categories of chronic disease (cardiovascular, cancer, diabetes, obesity, neurologic, pulmonary, rheumatologic, autoimmune/acquired immune, gastrointestinal). See Methods section and eTable 4 for details.

¶Score based on 4 variables (highest level of education, perceived financial situation, enough money to meet needs, and difficulty paying monthly bills). Higher score (possible range 0–8) is more disadvantage.

#Score based on exposure to 5 categories of adverse childhood experiences (emotional abuse, physical abuse, sexual abuse, parental separation or divorce, and household substance abuse). See Methods section and eTable 3 for details.

\*\*Score based on 3 variables (welfare receipt and duration, financial status relative to others, and parental education). Higher score (possible range 0–6) is more disadvantage. For the MIDUS 2 cohort, we used responses collected for these items in MIDUS 1 (1995–96) because these items were not asked in MIDUS 2 (2004–06).

relatively weaker and more variable than in subgroups with lower ACE or SED scores.

After adjusting for covariates, there was a significant association between family connection and the scores for all 6

subconstructs of flourishing (eTable 8). When maternal and paternal connection scores were analyzed separately, the associations between connection and the flourishing z score were both significant and of similar magnitude (eTable 9).

**Table 2.** Association Between Childhood Family Connection and Adult Flourishing

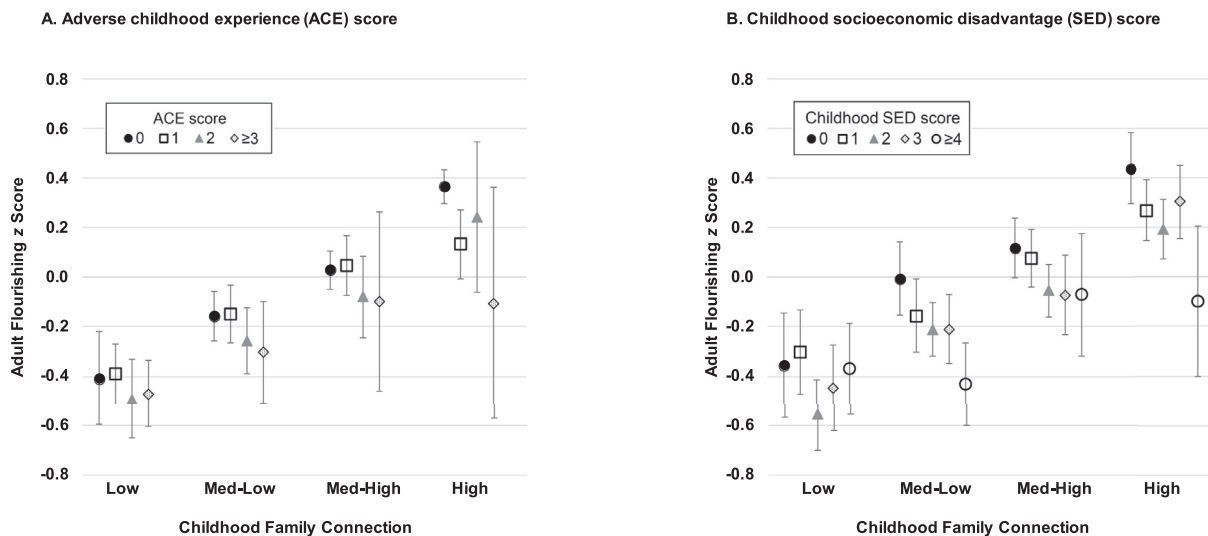
Exposure Group		Adult Flourishing z Score		
Quartile of Childhood Family Connection z Score	No. (%) in Quartile*	Unadjusted Mean (95% CI)	Adjusted Mean (95% CI) <sup>†</sup>	Adjusted Difference (95% CI) <sup>†,‡</sup>
Low (<-0.68)	1040 (24.8)	-0.45 (-0.54, -0.37)	-0.41 (-0.49, -0.33)	Reference
Medium-low (-0.68 to 0.16)	1089 (25.9)	-0.15 (-0.22, -0.08)	-0.18 (-0.25, -0.12)	0.22 (0.12, 0.32)
Medium-high (>0.16-0.80)	1043 (24.8)	-0.00 (-0.07, 0.06)	-0.01 (-0.07, 0.06)	0.40 (0.30, 0.51)
High (>0.80)	1027 (24.5)	0.24 (0.17, 0.32)	0.25 (0.18, 0.32)	0.66 (0.55, 0.78)

CI indicates confidence interval.

\*No. (%) = unweighted n and weighted percentages of sample.

<sup>†</sup>N = 4134. There was listwise deletion of 65 cases that were missing data on race, marital status, and/or current socioeconomic disadvantage score, which were covariates included in the regression model. Adjusted for the following variables: age (continuous), gender, race, marital status, current chronic disease score (continuous), current socioeconomic disadvantage score (continuous), adverse childhood experiences score (continuous), and childhood socioeconomic disadvantage score (continuous).

<sup>‡</sup>Obtained from the beta coefficients for the dummy variables in the regression representing the medium-low, medium-high, and high quartiles of childhood family connection, using adult flourishing z score as the dependent variable. The differences between quartiles were determined by examining regression coefficients for those with medium-low, medium-high, or high childhood family connection relative to those with low childhood family connection.



**Figure.** Association of childhood family connection with adult flourishing by level of childhood adversity. All points represent mean adult flourishing z scores, and the uncertainty bars represent the 95% CI. Predicted mean (95% CI) flourishing z scores at each quartile of childhood family connection (high, medium-high, medium-low, and low) were derived from a separate regression model for a given subgroup of ACE score (4 models) and childhood SED score (5 models). Each model was adjusted for the following variables: age (continuous), gender, race, marital status, current chronic disease score (continuous), and current SED score (continuous). Models were also adjusted for ACE score (continuous) and childhood SED score (continuous) if these were not subgrouping variables. ACE indicates adverse childhood experience; CI, confidence interval; and SED, socioeconomic disadvantage.

**DISCUSSION**

In this cross-sectional analysis of survey data obtained from a nationally representative sample of approximately 4200 US adults, we found a significant, positive, graded association between childhood family connection and flourishing, after controlling for current SED and chronic disease burden. This significant association was present across subgroups of adults who reported differing levels of ACEs and childhood SED, but was weaker in the subgroups with the highest levels of childhood adversity.

**FINDINGS IN CONTEXT**

Four studies utilizing data from MIDUS have reported on the association between childhood family connection and flourishing, and each showed, as we did, a significant,

positive association.<sup>16,17,20,21</sup> However, our study differed from the others in several respects. We assessed flourishing with the 42-item version of Ryff’s Psychological Well-being Scale, used in M2 and MR1, rather than the 18-item version.<sup>9</sup> We used only the MIDUS participants in the nationally representative random-digit-dialing sample and weighted the survey data to reflect that sampling. Most importantly, we examined the relationship between childhood family connection and adult flourishing across levels of childhood adversity while adjusting for current SED and chronic disease burden. Among these 4 other studies, the analyses most comparable to ours is from Chen and colleagues, who did not use data from the MR1 cohort. They showed that for each 1 SD increase in family connection score (labeled by them as parental warmth and

based on 6 of the 7 items we used) there was a 0.19 (95% CI, 0.16, 0.23) SD increase in the 18-item version of the flourishing score, which is close to the 0.25 (95% CI, 0.20, 0.29) SD increase we found. In a study of 423 young adults (18 to 29 years of age) who had type 1 diabetes, we found that a 1 SD increase in family connection was associated with a 0.44 (95% CI, 0.34, 0.53) SD increase in the flourishing score, using the same measures as in the current study.

### LIMITATIONS

Using a cross-sectional design, we cannot infer a causal relationship between childhood family connection and adult flourishing. In addition, common-rater bias and reverse causality cannot be excluded. Those who reported greater flourishing may have been more likely to recall childhood circumstances more positively. However, recall of positive parental relations is likely to be accurate,<sup>25</sup> and we found that positive family connection was reported at all levels of childhood adversity. The strength of the association we found may have been overestimated due to insufficient adjustment for confounding. Alternatively, we may have underestimated the strength of the association by controlling for factors, such as current chronic disease and SED, which may be on the causal pathway between childhood family connection and adult flourishing. Finally, bias may have arisen because we excluded participants in each cohort who had not completed all the MIDUS phone surveys and mailed SAQs.

### IMPLICATIONS

Pediatric and public health practice in recent decades has increasingly focused on the developmental origins of disease.<sup>26</sup> In contrast, this study examines the developmental origins of flourishing. Numerous scientific studies now support the conventional wisdom, often passed within families across generations, that family connection matters for children's outcomes.<sup>27</sup> Even as the composition of US families evolves, this wisdom still emphasizes the central role of household adults in developing safe, stable, and nurturing relationships with children.<sup>2,3</sup> A report from the National Research Council has documented the role of healthy adult-child relationships in helping children avoid later social harms and health problems.<sup>28</sup> However, to our knowledge, this is the first population-based study to suggest that childhood family connection is associated with flourishing in midlife and older adults across levels of childhood adversity.

Evidence-based interventions exist to support positive parenting skills, but these interventions are largely focused on preventing negative outcomes and are primarily delivered to "at-risk" families.<sup>29–31</sup> Although these interventions were not developed to increase adult flourishing, our study suggests they may do so given their emphasis on parent-child relationships. A variety of interventions for adults are also being created to promote flourishing.<sup>32</sup> Some of these interventions are based on acceptance and commitment therapy, which is suited to

increasing one's acceptance of past trauma.<sup>33</sup> Others are based on mindfulness practices that emphasize not only addressing pain and suffering,<sup>34</sup> but also increasing one's awareness of positive relationships and experiences.<sup>35</sup> It is possible that future interventions to promote family connection could increase adult flourishing by including efforts to increase family-level awareness and understanding of adversities, both ongoing and historical,<sup>36</sup> and positive relationships and experiences, such as hope<sup>37</sup> and gratitude.<sup>38</sup> This integration of positive and negative experiences distinguishes eudaimonic well-being<sup>15</sup> (flourishing, as we measured it in our study) from other well-being frameworks and can account for the apparent contradiction of flourishing with adversity.<sup>13,14</sup> This integration is also important for patients across the life course as they manage the adversity of injury, chronic disease, and aging.<sup>39</sup>

Despite efforts to reduce childhood maltreatment<sup>40</sup> and lessen the intergenerational trauma that results from social inequity,<sup>41</sup> much adversity and trauma across the life course cannot be prevented. For example, not all the adversities that accompany chronic disease, aging, or the current COVID-19 pandemic can be avoided. For this reason, it is important to identify and address those modifiable factors in childhood, such as family connection, that may promote flourishing over the life course, even with its inevitable adversities. Pediatricians, in particular, can support family connection by using a strengths-based approach,<sup>42</sup> which identifies positive aspects of the family environment and emphasizes the value to the child of stable and caring relationships with adults.

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### SUPPLEMENTARY DATA

Supplementary data related to this article can be found online at <https://doi.org/10.1016/j.acap.2021.03.002>.

### REFERENCES

1. World Health Organization. *Preventing Violence Through the Development of Safe, Stable and Nurturing Relationships Between Children and Their Parents and Caregivers*. Geneva, Switzerland: World Health Organization Press; 2009. Available at: [https://apps.who.int/iris/bitstream/handle/10665/44088/9789241597821\\_eng.pdf;jsessionid=206A643745DD82E944A06A5FBB984B01?sequence=1](https://apps.who.int/iris/bitstream/handle/10665/44088/9789241597821_eng.pdf;jsessionid=206A643745DD82E944A06A5FBB984B01?sequence=1). Accessed June 11, 2020.

2. Centers for Disease Control and Prevention. National Center for Injury Prevention and Control. Division of Violence Prevention. *Essentials for Childhood: Creating Safe, Stable, Nurturing Relationships and Environments for All Children*. 2014. Available at: <https://www.cdc.gov/violenceprevention/pdf/essentials-for-childhood-framework508.pdf>. Accessed June 11, 2020.
3. National Scientific Council on the Developing Child. *Supportive Relationships and Active Skill-Building Strengthen the Foundations of Resilience: Working Paper 13*. 2015. Available at: <https://46y5eh11fhgw3ve3ytpwxt9r-wpengine.netdna-ssl.com/wp-content/uploads/2015/05/The-Science-of-Resilience2.pdf>. Accessed June 11, 2020.
4. Masten A. Resilience comes of age: reflections on the past and outlook for the next generation of research. In: Glantz M, Johnson J, eds. *Longitudinal Research in the Social and Behavioral Sciences. Resilience and Development: Positive Life Adaptations*. New York: Kluwer Academic/Plenum Press; 1999:281–296.
5. Werner EE. Resilience in development. *Curr Dir Psychol Sci*. 1995;4:81–84. <https://doi.org/10.1111/1467-8721.ep10772327>.
6. Richmond JB, Beardslee WR. Resiliency: research and practical implications for pediatricians. *J Dev Behav Pediatr*. 1988;9:157–163. <https://doi.org/10.1097/00004703-198806000-00007>.
7. Ryff CD. Happiness is everything, or is it? Explorations on the meaning of psychological well-being. *J Pers Soc Psychol*. 1989;57:1069–1081. <https://doi.org/10.1037/0022-3514.57.6.1069>.
8. Ryff CD, Singer BH. Know thyself and become what you are: a eudaimonic approach to psychological well-being. *J Happiness Stud*. 2008;9:13–39. <https://doi.org/10.1007/s10902-006-9019-0>.
9. Ryff CD. Psychological well-being revisited: advances in the science and practice of eudaimonia. *Psychother Psychosom*. 2014;83:10–28. <https://doi.org/10.1159/000353263>.
10. Boyle PA, Buchman AS, Wilson RS, et al. Effect of purpose in life on the relation between Alzheimer disease pathologic changes on cognitive function in advanced age. *Arch Gen Psychiatry*. 2012;69:499–504. <https://doi.org/10.1001/archgenpsychiatry.2011.1487>.
11. Cohen R, Bavishi C, Rozanski A. Purpose in life and its relationship to all-cause mortality and cardiovascular events: a meta-analysis. *Psychosom Med*. 2016;78:122–133. <https://doi.org/10.1097/PSY.0000000000000274>.
12. Whitaker RC, Dearth-Wesley T, Herman AN, et al. Association of childhood family connection with flourishing in young adulthood among those with type 1 diabetes. *JAMA Network Open*. 2020;3:e200427. <https://doi.org/10.1001/jamanetworkopen.2020.0427>.
13. Huta V, Waterman AS. Eudaimonia and its distinction from hedonia: developing a classification and terminology for understanding conceptual and operational definitions. *J Happiness Stud*. 2014;15:1425–1456. <https://doi.org/10.1007/s10902-013-9485-0>.
14. Ryan RM, Deci EL. On happiness and human potentials: a review of research on hedonic and eudaimonic well-being. *Annu Rev Psychol*. 2001;52:141–166. <https://doi.org/10.1146/annurev.psych.52.1.141>.
15. Ryff CD, Singer B. Flourishing under fire: resilience as a prototype of challenged thriving. In: Keyes CLM, Haidt J, eds. *Flourishing: Positive Psychology and the Life Well-Lived*. Washington, D.C: American Psychological Association; 2003:15–36.
16. An JS, Cooney TM. Psychological well-being in mid to late life: the role of generativity development and parent–child relationships across the lifespan. *Int J Behav Dev*. 2006;30:410–421. <https://doi.org/10.1177/0165025406071489>.
17. Chen Y, Kubzansky LD, VanderWeele TJ. Parental warmth and flourishing in mid-life. *Soc Sci Med*. 2019;220:65–72. <https://doi.org/10.1016/j.socscimed.2018.10.026>.
18. Huppert FA, Abbott RA, Ploubidis GB, et al. Parental practices predict psychological well-being in midlife: life-course associations among women in the 1946 British birth cohort. *Psychol Med*. 2010;40:1507–1518. <https://doi.org/10.1017/S0033291709991978>.
19. Lee LO, Aldwin CM, Kubzansky LD, et al. Do cherished children age successfully? Longitudinal findings from the Veterans Affairs Normative Aging Study. *Psychol Aging*. 2015;30:894–910. <https://doi.org/10.1037/pag0000050>.
20. Moran KM, Turiano NA, Gentzler AL. Parental warmth during childhood predicts coping and well-being in adulthood. *J Fam Psychol*. 2018;32:610–621. <https://doi.org/10.1037/fam0000401>.
21. Rothrauff TC, Cooney TM, An JS. Remembered parenting styles and adjustment in middle and late adulthood. *J Gerontol B Psychol Sci Soc Sci*. 2009;64:137–146. <https://doi.org/10.1093/geronb/gbn008>.
22. Institute on Aging, University of Wisconsin. *Midlife in the United States (MIDUS): A National Longitudinal Study of Aging and Well-being: History & Overview of MIDUS*. Madison, WI: Institute on Aging; 2011. Available at: <http://midus.wisc.edu/scopeofstudy.php#History>. Accessed June 11, 2020.
23. Rossi A. *Caring and Doing for Others: Social Responsibility in the Domains of Family, Work, and Community*. Chicago, IL: The University of Chicago Press; 2001.
24. Boylan JM, Cundiff JM, Fuller-Rowell TE, et al. Childhood socioeconomic status and inflammation: psychological moderators among Black and White Americans. *Health Psychol*. 2020;39:497–508. <https://doi.org/10.1037/hea0000866>.
25. Brewin CR, Andrews B, Gotlib IH. Psychopathology and early experience: a reappraisal of retrospective reports. *Psychol Bull*. 1993;113:82–98. <https://doi.org/10.1037/0033-2909.113.1.82>.
26. Gluckman PD, Hanson MA. Developmental origins of disease paradigm: a mechanistic and evolutionary perspective. *Pediatr Res*. 2004;56:311–317. <https://doi.org/10.1203/01.PDR.0000135998.08025.FB>.
27. National Research Council. *Nurturing relationships. From Neurons to Neighborhoods: The Science of Early Childhood Development*. Washington, DC: The National Academies Press; 2000:224–266. <https://doi.org/10.17226/9824>.
28. National Research Council and Institute of Medicine. *Preventing Mental, Emotional, and Behavioral Disorders among Young People: Progress and Possibilities*. Washington, DC: National Academies Press; 2009.
29. Sanders MR, Kirby JN, Tellegen CL, et al. The triple P-positive parenting program: a systematic review and meta-analysis of a multi-level system of parenting support. *Clin Psychol Rev*. 2014;34:337–357. <https://doi.org/10.1016/j.cpr.2014.04.003>.
30. Yahlkoski A, Hurl K, Theule J. Efficacy of the circle of security intervention: a meta-analysis. *J Infant Child Adolesc Psychother*. 2016;15:95–103. <https://doi.org/10.1080/15289168.2016.1163161>.
31. Olds D, Henderson Jr CR, Cole R, et al. Long-term effects of nurse home visitation on children's criminal and antisocial behavior: 15-year follow-up of a randomized controlled trial. *JAMA*. 1998;280:1238–1244. <https://doi.org/10.1001/jama.280.14.1238>.
32. Weiss LA, Westerhof GJ, Bohlmeijer ET. Can we increase psychological well-being? The effects of interventions on psychological well-being: a meta-analysis of randomized controlled trials. *PLoS One*. 2016;11:e0158092. <https://doi.org/10.1371/journal.pone.0158092>.
33. Walsler RD, Westrup D. *Acceptance and Commitment Therapy for the Treatment of Post-Traumatic Stress Disorder and Trauma-Related Problems: A Practitioner's Guide to Using Mindfulness and Acceptance Strategies*. Oakland, CA: New Harbinger Publications; 2007.
34. Zeidan F, Vago D. Mindfulness meditation-based pain relief: a mechanistic account. *Ann N Y Acad Sci*. 2016;1373:114. <https://doi.org/10.1111/nyas.13153>.
35. Ivtzan I, Young T, Martman J, et al. Integrating mindfulness into positive psychology: a randomised controlled trial of an online positive mindfulness program. *Mindfulness*. 2016;7:1396–1407. <https://doi.org/10.1007/s12671-016-0581-1>.
36. Bloom SL. *Creating Sanctuary: Toward the Evolution of Sane Societies*. New York: Routledge; 2013. Revised.
37. Mullin A. Children's hope, resilience and autonomy. *Ethics Soc Welf*. 2019;13:230–243. <https://doi.org/10.1080/17496535.2019.1588907>.
38. Hussong AM, Langley HA, Rothenberg WA, et al. Raising grateful children one day at a time. *Appl Dev Sci*. 2019;23:371–384. <https://doi.org/10.1080/10888691.2018.1441713>.
39. Huber M, Knottnerus JA, Green L, et al. How should we define health? *BMJ*. 2011;343:d4163. <https://doi.org/10.1136/bmj.d4163>.

40. Daro D, Donnelly AC. Charting the waves of prevention: two steps forward, one step back. *Child Abuse Negl.* 2002;26:731–742. [https://doi.org/10.1016/S0145-2134\(02\)00344-7](https://doi.org/10.1016/S0145-2134(02)00344-7).
41. Walters KL, Mohammed SA, Evans-Campbell T, et al. Bodies don't just tell stories, they tell histories: embodiment of historical trauma among American Indians and Alaska Natives. *Du Bois Rev.* 2011;8:179–189. <https://doi.org/10.1017/S1742058X1100018X>.
42. American Academy of Pediatrics. *Strength Based Approach: Healthy Active Living for Families Implementation Guide*. American Academy of Pediatrics; 2021. Available at: <https://www.aap.org/en-us/advocacy-and-policy/aap-health-initiatives/ HALF-Implementation-Guide/communicating-with-families/Pages/Strength-Based-Approach.aspx>. Accessed February 3, 2021.