

Retrospective Memories of Parental Care and Health From Mid- to Late Life

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Objective: Perceptions of early caregiving experiences are hypothesized to be influential across the life span. However, previous research testing this hypothesis focuses primarily on young adults and use mostly cross-sectional designs. The current study examined associations between memories of early caregiving experiences and trajectories of depressive symptoms and physical health in 2 large samples of middle-aged and older adults. **Method:** Sample 1 consisted of participants from the National Survey of Midlife Development in the United States ($n = 7,108$) followed for 18 years (from 1995/1996 until 2013/2014). Sample 2 consisted of participants from the Health and Retirement Study ($n = 15,234$) followed over a 6-year period. Memories of caregiver support before age 18 were retrospectively assessed in middle and older adulthood; associations between these memories and changes in self-rated health, chronic health conditions, and depressive symptoms over time were examined. **Results:** Memories of higher parental affection in early childhood were associated with better self-rated health and lower depressive symptoms over intervals of approximately 6 and 18 years, in both samples; the results for chronic health conditions was more mixed. These associations persisted over time and were not moderated by time. **Conclusion:** Associations between perceptions of caregiver support and health persisted over time, underscoring the importance of memories of close relationships for health and depressive symptoms across the life span, even into late life. Findings are discussed in relation to models that link perceptions of early life experiences to later life outcomes.

Keywords: perceptions of early experiences, parental affection, life span development, middle-age, older adulthood

Are memories of a rosy past relationship with our parents associated with depression and physical health over time? Memories of positive relationships likely serve many functions—they instill us with a sense of gratitude (Algoe, 2012), make us feel good (Gable, Gonzaga, & Strachman, 2006), and give us hope for our current and future relationships (Abeyta, Routledge, & Juhl, 2015). There are also theoretical frameworks that suggest that memories of our past experiences, especially those with our parents, contribute to working models and representations about close relationships and the world more generally (Collins & Allard, 2004; Fraley, 2007; Pietromonaco & Barrett, 2000). Memories of past experiences, whether they serve to regulate emotions or guide future interpersonal behavior, are thus likely implicated in individuals' health behavior and how they regulate stress (regardless of the accuracy of those memories; Cohen & Pressman, 2006;

Pietromonaco, Uchino, & Dunkel Schetter, 2013; Reuben et al., 2016). Indeed, perceptions of positive early caregiving environments are associated with adaptive development and adjustment in adolescence and young adulthood (Enns, Cox, & Clara, 2002; Luecken, 2000; Newcomb & Bentler, 1988; Oriña et al., 2011; Richman & Flaherty, 1986; Russek & Schwartz, 1997; Shaw, 2006; Shaw & Krause, 2002; Shaw, Krause, Chatters, Connell, & Ingersoll-Dayton, 2004; Wills & Cleary, 1996). However, very few studies have examined associations between perceptions of early relationships and health and well-being beyond adolescence or young adulthood; even fewer include longitudinal follow-up assessments of health and well-being. In this report, we present data from two panel studies to examine whether perceptions of early caregiving experiences are associated with health and well-being over an 18- and 6-year period, respectively, among middle-aged and older adults.

According to Collins (1996), in the context of interpersonal situations, people are often guided by memories of prior relationships and situations. The activation of memories of relationships then triggers cognitive and emotional responses to interpersonal situations, which in turn guide our behavior in those situations. Interpersonal behavior is thought to affect stress response systems and health behavior; thus, affecting downstream health outcomes (Pietromonaco, DeBuse, & Powers, 2013; Pietromonaco, Uchino, & Dunkel Schetter, 2013). Aside from our behavior in interpersonal situations, the positive affect that results from positive memories of past relationships may also provide some health benefits, primarily through stress reduction or the initiation of positive health behavior (Hill, Allemand, & Roberts, 2013; Sin, Moskow-

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itz, & Whooley, 2015). However, it is unclear whether memories of our past relationships are associated with *current* health and well-being in middle and older adulthood, which would be a natural extension of process models linking the positive benefits of interpersonal behavior and emotion regulation for health.

The preponderance of evidence from the few studies examining the association between perceptions of early caregiving and health and well-being suggests that perceptions of greater parental affection in early childhood are associated with a variety of positive outcomes in young adulthood, including higher quality work and personal relationships, lower substance abuse, lower depression, and fewer health problems (e.g., Shaw, 2006; Shaw et al., 2004). A related issue is quantifying the influence of perceived affection that is received from mothers versus fathers. Much of the existing work on parental care relies exclusively on maternal warmth and rarely examines fathers' roles in development (Featherstone, 2004; Lamb, 2000; Sarkadi, Kristiansson, Oberklaid, & Bremberg, 2008). Little is known from the few prospective studies that do exist about the relative magnitudes of the contributions of maternal versus paternal affection on depression and physical health, particularly in samples beyond adolescence (Sarkadi et al., 2008). Are perceptions of maternal and paternal affection both associated with health and well-being? Or does one type of affection matter less when you statistically control for the other type? Or do perceptions of maternal or paternal affection diminish in influence over time? Considering the mechanisms that link positive parental memories to less depression and better physical health, it seems logical that more positive memories of paternal care would also be related to better health. Unfortunately, our uncertainty about these questions stems from some of the methodological decisions made in past research. For example, some studies only measure perceptions of maternal affection (Davis, Rudy, Su-Russell, & Zhang, 2018; Jackson-Newsom, Buchanan, & McDonald, 2008); other studies combine perceptions of maternal and paternal affection into one summary score (Shaw et al., 2004). As such, large studies examining the associations between perceptions of maternal *and* paternal affection on health among middle aged and older adults are needed.

The Current Study

In the current study, we examined associations between early caregiving perceptions and trajectories of depressive symptoms and physical health across middle and older adulthood in two nationally representative samples. Parental affection was assessed using retrospective reports of participants' relationship with their mothers and fathers. Drawing on life course theories that suggest working models of early experiences set individuals on particular trajectories of health and well-being over time (Collins & Feeney, 2004; Elder & Giele, 2009; Fraley, 2007; Pietromonaco, Uchino, & Dunkel Schetter, 2013), we predicted that retrospective reports of paternal affection in childhood would be positively associated with better physical health and fewer depressive symptoms both *over time* and at *different points in the adult life span*. We did not make explicit hypotheses about the relative magnitude of the associations between perceived maternal versus paternal affection and health, but we expected that they would each demonstrate unique associations with health. We tested these hypotheses in two large samples of middle-aged and older adults followed over intervals of approximately 18 and 6 years, respectively.

Method

Participants

Two publicly available data sets were used to test the association between perceptions of caregiver affection and longitudinal changes in depressive symptoms and physical health. The use of existing data sets was determined to be exempt from ethical oversight by the institutional review board at Michigan State University.

Sample 1 consisted of participants from the National Survey of Midlife Development in the United States (MIDUS; Brim, Ryff, & Kessler, 2004). The first wave of the MIDUS study (MIDUS 1, 1995–1996) sampled 7,108 English-speaking adults in the United States ($M_{\text{age}} = 46.38$, $SD = 13.00$; 51.1% female; 90.7% White, 5.2% Black/African American, 4.1% other race/ethnicities, $Mdn_{\text{Education}} = 1\text{--}2$ years of college). In the second wave of data collection (MIDUS 2, 2004–2005), approximately 70% of the original sample ($n = 4,963$) were successfully contacted for follow-up assessments. In the third wave of data collection (MIDUS 3, 2013–2014), approximately 66% of the sample from the second wave ($n = 3,294$) were successfully retained for follow-up assessments.

Sample 2 consisted of participants from the Health and Retirement Study (HRS), a nationally representative prospective panel study that has surveyed more than 22,000 Americans aged 50 and above every 2 years since 1992 (Sonnegg et al., 2014). In 2006, a random 50% of HRS respondents were given a self-report questionnaire that asked questions about parental affection. In 2008, the remaining 50% of HRS respondents completed the self-report questionnaire. Thus, two distinct cohorts were formed that had measures of parental affection collected once (at different waves), but depressive symptoms and physical health were assessed every 2 years (i.e., Cohort 1: Assessed in 2008 [Wave 1], 2010 [Wave 2], 2012 [Wave 3], and 2014 [Wave 4]; Cohort 2: Assessed in 2010 [Wave 1], 2012 [Wave 2], and 2014 [Wave 3]). The cohorts were combined into one sample for the present analyses to increase statistical power and precision (as done in Chopik, Kim, & Smith, 2015); in line with findings from past studies, interaction terms with cohort showed that cohort source did not moderate any of the associations reported below. The final combined sample comprised 15,234 older adults ($M_{\text{age}} = 67.73$, $SD = 11.00$; 59.2% female; 73.5% White, 14.2% Black/African American, 9.5% Hispanic, and 2.7% other race/ethnicities, $Mean_{\text{Years Of Education}} = 12.72$, $SD = 3.06$).

Measures

Perceptions of parental affection. In MIDUS 1 (1994–1995), perceptions of parental affection were assessed with 14 items that asked about respondents' relationships with their mothers (7 items) and fathers (7 items) before the age of 18. In HRS, perceptions of parental affection were assessed in 2008/2010 with 5 items asking about relationships with mothers (4 items) and fathers (1 item) before the age of 18. The items in each study focused on perceptions of the availability of emotional support from parents as well as the quality of their relationship; there was a substantial degree of overlap between the items used in the two samples.

In MIDUS 1, six items each for mothers and fathers were asked on a 4-point Likert-scale ranging from 1 (*a lot*) to 4 (*not at all*): "How

much did she/he understand your problems and worries?," "How much could you confide in her/him about things that were bothering you?," "How much love and affection did she/he give you?," "How much time and attention did she/he give you when you needed it?," "How much effort did she/he put into watching over you and making sure you had a good upbringing?," and "How much did she/he teach you about life?" A seventh item, "How would you rate your relationship with your mother/father during the years you were growing up?" was rated on a 5-point Likert scale ranging from 1 (*excellent*) to 5 (*poor*). MIDUS personnel reverse-scored and multiplied this last item by a .75 factorial to maintain continuity with the other items. These seven items for both mothers and fathers were recoded and averaged such that higher scores reflect more maternal ($\alpha = .91$) and paternal ($\alpha = .93$) affection.¹

In HRS, perceptions of maternal affection were assessed with variants of the same items used in MIDUS. Three items were rated on a 4-point Likert scale ranging from 1 (*a lot*) to 4 (*not at all*): "How much time and attention did your mother give you when you needed it?," "How much effort did your mother put into watching over you and making sure you had a good upbringing?," and "How much did your mother teach you about life?,". A fourth item, "I had a good relationship with my mother before age 18," was rated on a 5-point Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). To create continuity among items, they were recoded, standardized, and averaged ($\alpha = .86$) such that higher scores reflect more maternal affection. Perceptions of paternal affection was assessed with a single item, "I had a good relationship with my father before age 18," rated on a 5-point Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Items measuring time/attention, effort, and teaching about life were unavailable for paternal relationships, which is a limitation of the current study.

Overall health. In both MIDUS and HRS, self-rated health was assessed with the same single item at both waves: "Would you say your health is excellent, very good, good, fair, or poor?" Participants rated their health on a scale ranging from 1 (*poor*) to 5 (*excellent*). Self-rated health is a strong predictor of objective markers of health and mortality (Idler & Benyamini, 1997; Schnittker & Bacak, 2014).

Chronic conditions. In both studies, participants received a list of self-reported chronic health problems and conditions. Participants' self-reports of chronic health conditions are reliably associated with physician reports of these conditions (Fisher, Faul, Weir, & Wallace, 2005).

In MIDUS, respondents reported whether they had experienced or been treated for any of 27 chronic conditions (e.g., thyroid disease, urinary or bladder problems, gall bladder trouble, high blood pressure, diabetes or high blood sugar, stroke, ulcer, and hernia/rupture) in the past 12 months. The number of conditions was summed so that higher values reflected more health problems. Additional chronic conditions were assessed at Waves 2 and 3, but we limited our investigation to the 27 common chronic conditions across the study window.

In HRS, an index of seven major chronic conditions was computed for each participant. Each participant self-reported eight physician diagnosed conditions: (a) high blood pressure; (b) diabetes; (c) cancer or a malignant tumor of any kind (excluding minor skin cancer); (d) lung disease; (e) coronary heart disease including heart attacks, angina, and congestive heart failure; (f) arthritis or rheumatism; and (g) stroke. The number of chronic

conditions was summed so that higher values reflected more health problems.

Depressive symptoms. In MIDUS, depressive symptoms were measured at both waves with the World Health Organization's World Mental Health Composite International Diagnostic Interview-Short Form (CIDI-SF; Kessler, Andrews, Mroczek, Ustun, & Wittchen, 1998). The CIDI-SF is a checklist of seven depressive symptoms (losing interest in most things, feeling lower energy, changes in appetite, trouble falling asleep, trouble concentrating, feeling down, and thoughts about death). Participants self-reported whether or not they experienced each of seven symptoms in the last 2 weeks. The number of depressive symptoms was summed, with higher levels indicating higher levels of depression. Internal consistency for the CIDI-SF checklist was somewhat low ($\alpha_{MIDUS1} = .52$), which is a limitation of the current study. The use of a more reliable depressive symptoms measure in HRS (see below) provides some additional confidence that we are assessing the parental memories—depression association appropriately. Nevertheless, future research should employ more reliable depression measures in population studies.

In HRS, depressive symptoms were measured at all waves with a modified 8-item version of the Center for Epidemiological Studies Depression Scale (CES-D; Radloff, 1977). Participants responded to interview questions about whether or not (i.e., yes or no) they experienced each of eight symptoms in the past week (feeling depressed, felt everything they did was an effort, restless sleep, happiness, lonely, enjoyed life, sad, and felt unmotivated). The number of dichotomous depressive symptoms was summed, with higher levels indicating higher levels of depression ($\alpha_{Wave1} = .82$).

Analytic Approach

To examine longitudinal changes in health, chronic conditions, and depression, and whether these changes were moderated by perceptions of parental affection in childhood, six multilevel models were constructed (one for each outcome—health, chronic conditions, and depression—for both samples). Multilevel modeling allows for the analysis of the entire sample, whereas traditional regression approaches utilize listwise deletion of subjects who do not have complete data on all measures. Thus, if an individual had missing data on paternal affection perceptions (e.g., if they only provided information on their relationship with their mother), those particular effects are only estimated among people with data on this variable. Health, chronic conditions, and depression at each wave were treated as within-subjects variables that varied over time. The linear coefficient of time was modeled on these within-subject observations. Perceptions of maternal and paternal affection at Wave 1 were entered as time-invariant predictors of health, chronic conditions, and depressive symptoms. Further, interactions between maternal/paternal affection perceptions and time were included to test whether the association between perceptions of

¹ Embedded within MIDUS are also items assessing parental discipline (e.g., "How strict was she/he with her rules for you.") and generosity (e.g., "How generous and helpful was she/he to people outside the family?"). Although the focus of the current report is on parental affection, we examined how these questions were associated with depressive symptoms and physical health. After controlling for maternal and paternal warmth and the covariates found in Table 1, the coefficients for maternal/paternal discipline and generosity were nonsignificant across all the outcomes ($ps > .08$).

affection and health became stronger, weaker, or stayed the same over time. Participant gender ($-1 = \text{male}$, $1 = \text{female}$), age (at Wave 1), race ($-1 = \text{White}$, $1 = \text{non-White}$), and education (at Wave 1) were included as covariates based on previous research examining associations between caregiver affection and health (Shaw, 2006). Because variation in retrospective memories might be partially attributable to variation in health and depression, we controlled for baseline standing in self-rated health, chronic health conditions, and depression in each analysis. When examining variation in a particular dependent variable (e.g., depression), an individual's standing at baseline on that variable (e.g., depression) need not be controlled for, as baseline standing is already accounted for in the intercept and linear slope estimates (e.g., an individual's baseline standing on the other two dependent variables (self-rated health, chronic health conditions) were controlled for in the depression analyses). All continuous variables were centered on the sample mean.

Results

Preliminary Analyses

Attrition analyses. A number of individuals from each sample did not complete any follow-up assessments ($N = 2,144$ MIDUS participants [30.2%]; $N = 1,166$ HRS participants [7.7%]). Below we review how these individuals differed from those who provided complete data.

National Survey of Midlife Development in the United States (MIDUS). Compared with individuals who have only one wave of data, those with at least two waves were more highly educated ($d = .35$), healthier ($d = .28$), had fewer chronic conditions ($d = .12$), and were less depressed ($d = .10$). Those who had longitudinal data and those who did not were otherwise comparable on other study variables ($ds < .04$).

Health and Retirement Study (HRS). Compared with individuals who have only one wave of data, those with at least two waves were more highly educated ($d = .68$), younger ($d = .25$), healthier ($d = .57$), received less paternal affection when they were younger ($d = .09$), had fewer chronic conditions ($d = .58$), and were less depressed ($d = .27$). Those who had longitudinal data and those who did not were otherwise comparable on other study variables ($ds < .03$).

Bivariate correlations. Descriptive statistics and correlations among primary study variables for the two samples are presented in Tables 1 (MIDUS) and 2 (HRS). In the MIDUS sample, men perceived higher levels of maternal and paternal affection and reported better health (but only at Wave 1), fewer chronic conditions, and fewer depressive symptoms compared with women. In the HRS sample, men perceived higher levels of maternal affection and reported fewer depressive symptoms across waves. In both samples, age was associated with perceiving greater maternal and paternal affection, such that older adults reported receiving more affection from their mothers and fathers during childhood. Older adults also reported worse physical health, more chronic conditions, and fewer depressive symptoms. Participants with higher levels of education had better health, fewer chronic conditions, and fewer depressive symptoms. There was also a correlation in which more educated participants perceived more maternal affection in both samples (and more paternal affection in MIDUS), but these

associations were very small in all cases. Non-White participants perceived greater paternal affection (in MIDUS only) and reported worse health than White participants. Non-White participants also reported more depressive symptoms in the HRS sample.

Perceptions of Caregiver Affection and Changes in Depression and Physical Health Over Time

The results from these multilevel models are presented in Tables 3 (for MIDUS) and 4 (for HRS). In both samples, perceiving higher levels of maternal affection in early childhood were each associated with better physical health and fewer depressive symptoms. Perceiving higher levels of paternal support was also associated with better physical health (in the HRS sample only) and fewer depressive symptoms (in both samples). The results for chronic health conditions were less straightforward—perceptions of maternal and paternal affection were both associated with fewer chronic conditions in the MIDUS sample, but not the HRS sample. The standardized coefficient of perceived maternal affection was usually larger than the standardized coefficient of paternal affection on each outcome. Worth noting, in nearly all cases, the interactions between perceived parental affection and time were not significant. The only exception was a significant perceived Maternal Affection \times Time interaction predicting chronic conditions in HRS. Decomposing this interaction revealed that the impact of perceived maternal affection on chronic conditions *increased* in magnitude over time, albeit this association was small. Specifically, those perceiving lower (-1 SD) levels of maternal affection in childhood increased in the number of chronic conditions over time ($b = .098$, $SE = .002$, $t = 49.83$, $p < .001$) compared with those perceiving higher (1 SD) levels of maternal affection in childhood ($b = .090$, $SE = .002$, $t = 47.48$, $p < .001$). These results suggest that the positive associations between parental affection on depressive symptoms and physical health *persist* over time and across the life span.^{2,3}

² Worth noting, HRS samples individuals at the household level, introducing a degree of nonindependence in the data. To account for this, we re-ran the three HRS models by adding an additional level (household) in the multi-level modeling analyses (using STATA's `xtmixed` command). These analyses led to nearly identical estimates (and identical levels and direction of significance) to the results presented in Table 2, suggesting that the nonindependence arising from household sampling had little influence in biasing the individual estimates (in this scenario with this data set).

³ In a supplementary analysis, we tested two-way perceived maternal affection \times perceived paternal affection interactions predicting each of the outcomes. These interactions test whether unique combinations of maternal and paternal affection are associated with better health. For five of the outcomes, this two-way interaction was not significant ($bs < 1.021$, $ps > .10$). The one exception was a significant maternal affection \times paternal affection interaction predicting chronic conditions in the MIDUS sample. Decomposing this interaction revealed that the participants reporting the fewest chronic conditions were those with more positive memories of maternal and paternal caregiving from their childhood. Among those perceiving lower (-1 SD) levels of paternal affection in childhood, the coefficient of perceived maternal affection was negative and significant ($b = -.214$, $SE = .056$, $t = 3.84$, $p < .001$). Among those perceiving higher (1 SD) levels of paternal affection in childhood, the coefficient of perceived maternal affection was negative, significant, and slightly stronger ($b = -.431$, $SE = .068$, $t = 6.31$, $p < .001$).

Table 1
Correlations Among Primary Study Variables for MIDUS Participants

	<i>n</i>	Mean (<i>SD</i>)	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Gender	7,027	— (—)														
2. Age	7,049	46.38 (13.00)	.02													
3. Education	7,095	6.77 (2.49)	-.10*	-.10*												
4. Race	6,176	— (—)	.03	-.10*	-.04*											
5. Maternal affection	6,255	3.14 (.69)	-.13*	.04*	.03	.02										
6. Paternal affection	5,988	2.74 (.80)	-.03	.07*	.03	.04*	.47*									
7. Health W1	7,097	3.53 (.99)	-.03	-.16*	.25*	-.07*	.09*	.06*								
8. Cond W1	6,308	2.41 (2.51)	.12*	.18*	-.13*	.02	-.14*	-.09*	-.41*							
9. DepW1	7,108	.79 (1.93)	.09*	-.11*	-.07*	.02	-.15*	-.12*	-.16*	.26*						
10. Health W2	4,962	3.54 (1.02)	-.02	-.18*	.26*	-.05*	.10*	.08*	.53*	-.32*	-.13*					
11. Cond W2	4,041	2.42 (2.53)	.11*	-.11*	-.06*	-.01	-.12*	-.10*	-.11*	.15*	.30*	-.16*				
12. Dep W2	4,963	.53 (1.64)	.12*	.20*	-.15*	.06*	-.10*	-.06*	-.34*	.53*	.18*	-.41*	.21*			
13. Health W3	3,293	3.43 (1.04)	-.02	-.08*	.23*	-.08*	.08*	.07*	.44*	-.30*	-.13*	.55*	-.16*	-.36*		
14. Cond W3	2,676	2.64 (2.48)	.16*	.15*	-.14*	.03	-.11*	-.07*	-.33*	.53*	.18*	-.37*	.59*	.18*	-.45*	
15. Dep W3	3,294	.47 (1.57)	.10*	-.08*	-.06*	.002	-.13*	-.10*	-.14*	.20*	.25*	-.14*	.32*	.20*	-.18*	.23*

Note. MIDUS = National Survey of Midlife Development in the United States; Cond = conditions; Dep = depression; gender: -1 = male, 1 = female; Race: -1 = White, 1 = non-White; Education: 1 = no school/some grade school, 2 = eighth grade/junior high school, 3 = some high school, 4 = GED, 5 = graduated from high school, 6 = 1 to 2 years of college, no degree yet, 7 = 3 or more years of college, no degree yet, 8 = grad, 2 year college, vocational school, or associates degree, 9 = grad, 4 or 5 year college or bachelor's degree, 10 = some graduate school, 11 = Master's degree +. * *p* < .01.

Discussion

Higher perceived parental affection was associated with better self-rated health, fewer chronic conditions, and fewer depressive symptoms. These findings were largely invariant over time, suggesting that the associations between memories of early experiences on our health and well-being persist over time, across middle and older adulthood. Perceived maternal and paternal affection were each associated with fewer depressive symptoms and better physical health, although the associations for paternal affection were smaller than those for maternal affection. The associations for parental affection perceptions were generally stronger for depressive symptoms than for physical health.

The reconstruction of parental memories is likely the product of many different forces—societal expectations, adult children's own caregiving experiences (with their children), their current relationships with their parents, or yet more influences. For example, that memories of maternal affection had larger associations with health than memories of paternal affection may reflect the broader cultural circumstances into which participants from both samples were born. Because mothers were most likely primary caregivers during their childhood and the existence of cultural expectations that mothers serve primary caregiving roles (Bretherton, 1992), participants' evaluations of relationship quality in childhood may be more heavily weighted toward perceptions of their mothers.

Table 2
Correlations Among Primary Study Variables for HRS Participants

	<i>n</i>	Mean (<i>SD</i>)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1. Gen	15,234	— (—)																	
2. Age	15,234	67.73 (11.00)	-.04*																
3. Educ	15,195	12.72 (3.06)	-.04*	-.13*															
4. Race	15,231	— (—)	.05*	-.19*	-.27*														
5. Mat. affection	15,176	.00 (.87)	-.07*	.10*	.05*	.01													
6. Pat. affection	14,068	3.92 (1.25)	-.01	.12*	-.01	-.004	.43*												
7. Hea W1	15,224	3.16 (1.09)	-.002	-.09*	.29*	-.18*	.08*	.05*											
8. Cond W1	15,213	1.95 (1.37)	-.03*	.36*	-.15*	-.02*	-.01	.01	-.44*										
9. Dep W1	14,793	1.40 (1.94)	.09*	-.03*	-.21*	.14*	-.14*	-.10*	-.41*	.19*									
10. Hea W2	13,893	3.17 (1.07)	.003	-.11*	.28*	-.16*	.08*	.05*	.68*	-.41*	-.37*								
11. Cond W2	13,870	2.09 (1.39)	-.02*	.35*	-.16*	-.02	-.01	.01	-.43*	.94*	.18*	-.44*							
12. Dep W2	13,315	1.38 (1.95)	.10*	-.04*	-.21*	.14*	-.14*	-.11*	-.37*	.19*	.58*	-.42*	.20*						
13. Hea W3	12,696	3.11 (1.06)	.01	-.10*	.28*	-.16*	.08*	.07*	.65*	-.40*	-.34*	.68*	-.41*	-.37*					
14. Cond W3	12,684	2.22 (1.40)	-.02*	.33*	-.17*	-.001	-.02	-.01	-.42*	.90*	.18*	-.43*	.95*	.20*	-.44*				
15. Dep W3	12,212	1.40 (1.95)	.10*	-.02*	-.21*	.13*	-.14*	-.10*	-.37*	.19*	.55*	-.38*	.20*	.60*	-.43*	.22*			
16. HeaW4	5,157	3.06 (1.05)	-.01	-.10*	.26*	-.14*	.07*	.08*	.59*	-.36*	-.30*	.63*	-.37*	-.35*	.68*	-.39*	-.38*		
17. Cond W4	5,150	2.40 (1.38)	-.05*	.28*	-.15*	.01	-.01	-.02	-.41*	.84*	.19*	-.42*	.90*	.21*	-.43*	.95*	.22*	-.42*	
18. Dep W4	4,878	1.38 (1.94)	.10*	.02	-.20*	.12*	-.15*	-.12*	-.37*	.19*	.52*	-.37*	.20*	.58*	-.38*	.21*	.62*	-.40*	.23*

Note. HRS = Health and Retirement Study; Gen = gender; Educ = education; Hea = health; Cond = conditions; Dep = depression; Gender: -1 = male, 1 = female; Race: -1 = White, 1 = non-White; Education = years of education. * *p* < .01.

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Table 3
Growth Models Predicting Health, Chronic Conditions, and Depression in MIDUS Participants

Health	<i>b</i>	<i>SE</i>	β	<i>df</i>	<i>t</i>	<i>p</i>	95% CI (<i>b</i>)	
							LB	UB
Intercept	3.35	.02	3.37	6680.72	180.63	<.001	3.31	3.38
Time	-.10	.01	-.10	11869.25	-11.19	<.001	-.12	-.08
Maternal affection	.05	.02	.04	6107.47	2.99	.003	.02	.09
Paternal affection	.01	.01	.01	6063.55	.96	.34	-.01	.04
Maternal Affection × Time	-.001	.02	-.001	11937.55	-.09	.93	-.03	.03
Paternal Affection × Time	.003	.01	.002	11983.49	.24	.81	-.02	.03
Gender	.06	.01	.06	5828.19	5.57	<.001	.04	.07
Age	-.01	.001	-.11	6085.99	-11.00	<.001	-.01	-.01
Education	.08	.004	.20	5841.19	20.30	<.001	.07	.09
Race	-.12	.02	-.12	6536.99	-6.48	<.001	-.15	-.08
Conditions T1	-.13	.004	-.31	6048.40	-29.31	<.001	-.14	-.12
Depression T1	-.03	.01	-.05	5902.17	-5.14	<.001	-.04	-.02

Conditions	<i>b</i>	<i>SE</i>	β	<i>df</i>	<i>t</i>	<i>p</i>	95% CI (<i>b</i>)	
							LB	UB
Intercept	2.64	.05	2.57	6679.16	55.37	<.001	2.54	2.73
Time	.17	.02	.17	10461.53	7.18	<.001	.12	.21
Maternal affection	-.15	.04	-.10	6010.79	-3.32	.001	-.23	-.06
Paternal affection	-.07	.04	-.06	5982.36	-1.99	.047	-.15	-.001
Maternal Affection × Time	.04	.04	.03	10593.19	1.06	.29	-.04	.12
Paternal Affection × Time	.03	.03	.02	10598.56	.83	.41	-.04	.09
Gender	.12	.03	.23	5616.02	9.20	<.001	.18	.28
Age	.03	.002	.39	5849.55	15.31	<.001	.03	.04
Education	-.02	.01	-.06	5601.46	-2.20	.03	-.04	-.003
Race	.10	.05	.10	6467.59	2.22	.03	.01	.20
Health T1	-.82	.03	-.79	5802.14	-30.08	<.001	-.88	-.77
Depression T1	.24	.01	.44	5690.07	16.93	<.001	.21	.26

Depression	<i>b</i>	<i>SE</i>	β	<i>df</i>	<i>t</i>	<i>p</i>	95% CI (<i>b</i>)	
							LB	UB
Intercept	.58	.03	.57	6608.62	18.50	<.001	.52	.65
Time	-.13	.02	-.13	12706.35	-7.34	<.001	-.17	-.10
Maternal affection	-.18	.03	-.13	5838.12	-6.39	<.001	-.24	-.13
Paternal affection	-.07	.02	-.06	5790.70	-2.97	.003	-.12	-.02
Maternal Affection × Time	.03	.03	.02	12739.73	.97	.33	-.03	.09
Paternal Affection × Time	.04	.03	.03	12764.24	1.66	.10	-.01	.09
Gender	.08	.02	.08	5692.74	5.04	<.001	.05	.12
Age	-.02	.001	-.23	5976.94	-13.75	<.001	-.02	-.02
Education	-.01	.01	-.03	5691.99	-1.63	.10	-.02	.002
Race	-.01	.03	-.01	6536.43	-.29	.77	-.07	.05
Health T1	-.11	.02	-.11	5880.99	-5.82	<.001	-.15	-.07
Conditions T1	.14	.01	.33	5936.45	17.88	<.001	.12	.15

Note. MIDUS = National Survey of Midlife Development in the United States; CI = confidence interval; Gender: -1 = male, 1 = female; Race: -1 = White, 1 = non-White.

Indeed, when engaging with caregiving experiences of their own children, individuals often reflect and focus on reconstructing memories of their relationships with the own mothers in the past (Baruch & Barnett, 1983). Worth noting, memories of parent-child relationship quality are also more positive when individuals report more positive relationships with their mothers at the time of assessment (Dalton, Frick-Horbury, & Kitzmann, 2006). Parent-child relationships generally improve in middle age and older adulthood, especially after difficult life transitions (Kaufman & Uhlenberg, 1998). Thus, the positive retrospective memories of maternal caregiving might also reflect the relationship improvements individuals experience with their mothers in mid- and late life. However, memories of affection-

ate paternal care were also associated with fewer depressive symptoms and better physical health in the samples, over-and-above the contribution of maternal memories. With shifting cultural norms about the roles of fathers in caregiving settings, it is possible that the associations of parental caregiving memories with health may be different in more recent birth cohorts, as individuals may reflect and focus more on relationships with their fathers (Bogossian et al., 2017; Cabrera & Tamis-LeMonda, 2014; Lamb, 2000; Sarkadi et al., 2008). Although many of these explanations are speculation on our part, it is possible that participants are actively reflecting on the quality of their relationships with both their mothers and fathers when completing measures about either parent. But for reasons un-

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Table 4
Growth Models Predicting Health, Chronic Conditions, and Depression in HRS Participants

Health	<i>b</i>	<i>SE</i>	β	<i>df</i>	<i>t</i>	<i>p</i>	95% CI (<i>b</i>)	
							LB	UB
Intercept	3.02	.01	3.04	15293.19	403.91	<.001	3.00	3.03
Time	-.03	.002	-.03	41874.07	-15.18	<.001	-.03	-.03
Maternal affection	.04	.01	.03	15375.39	4.27	<.001	.02	.05
Paternal affection	.01	.01	.02	15295.63	2.67	.008	.004	.03
Maternal Affection \times Time	-.005	.003	-.004	41854.04	-1.85	.06	-.01	.0003
Paternal Affection \times Time	.002	.002	.002	41867.28	.84	.38	-.002	.01
Gender	.04	.01	.04	14531.96	6.11	<.001	.03	.05
Age	.0002	.001	.002	14915.24	.33	.74	-.001	.001
Education	.05	.002	.16	14583.90	24.84	<.001	.05	.06
Race	-.12	.01	-.12	14485.29	-15.43	<.001	-.13	-.10
Conditions T1	-.28	.005	-.37	14775.95	-56.16	<.001	-.29	-.27
Depression T1	-.14	.003	-.27	14691.29	-.42.32	<.001	-.15	-.14

Conditions	<i>b</i>	<i>SE</i>	β	<i>df</i>	<i>t</i>	<i>p</i>	95% CI (<i>b</i>)	
							LB	UB
Intercept	2.21	.01	2.16	13785.99	188.54	<.001	2.18	2.23
Time	.09	.001	.09	32026.26	73.78	<.001	.09	.10
Maternal affection	-.01	.01	-.01	13831.52	-.48	.63	-.03	.02
Paternal affection	-.01	.01	-.01	13809.04	-.94	.35	-.03	.01
Maternal Affection \times Time	-.004	.002	-.004	32023.93	-2.44	.02	-.01	-.001
Paternal Affection \times Time	.001	.001	.001	32025.34	.84	.40	-.001	.003
Gender	-.03	.01	-.03	13559.03	-3.36	.001	-.05	-.01
Age	.04	.001	.43	13685.96	42.64	<.001	.04	.04
Education	.00002	.004	.0001	13580.87	.01	.99	-.01	.01
Race	-.06	.01	-.06	13545.05	-5.18	<.001	-.09	-.04
Health T1	-.51	.01	-.55	13618.16	-50.10	<.001	-.54	-.49
Depression T1	.04	.01	.07	13597.01	6.38	<.001	.02	.05

Depression	<i>b</i>	<i>SE</i>	β	<i>df</i>	<i>t</i>	<i>p</i>	95% CI (<i>b</i>)	
							LB	UB
Intercept	1.45	.01	1.42	15578.97	101.52	<.001	1.43	1.48
Time	.01	.004	.01	41470.32	3.48	<.001	.01	.02
Maternal affection	-.17	.02	-.14	15639.79	-10.42	<.001	-.20	-.13
Paternal affection	-.07	.01	-.08	15541.14	-6.16	<.001	-.09	-.04
Maternal Affection \times Time	.003	.01	.003	41461.38	.55	.58	-.01	.01
Paternal Affection \times Time	.0004	.004	.001	41461.67	.11	.91	-.01	.01
Gender	.15	.01	.15	14755.57	12.33	<.001	.12	.17
Age	-.01	.001	-.08	15256.21	-6.45	<.001	-.01	-.01
Education	-.06	.004	-.18	14900.00	-14.11	<.001	-.07	-.05
Race	.08	.01	.08	14692.10	5.42	<.001	.05	.11
Health T1	-.58	.01	-.62	14994.68	-45.38	<.001	-.60	-.55
Conditions T1	.09	.01	.11	15027.03	8.30	<.001	.07	.11

Note. HRS = Health and Retirement Study; CI = confidence interval; Gender: -1 = male, 1 = female. Race: -1 = White, 1 = non-White.

clear, maternal memories may be more influential when examining associations with health.

Examining exactly how positive caregiving experiences influence health in later life can provide insight into the interpersonal and health decisions that individuals make across the life span. For example, concurrent support in adulthood (from family members, spouses, and friends) is related to health and mortality (House, Landis, & Umberson, 1988). However, the developmental antecedents of close relationship quality in adulthood (particularly in older adulthood) are rarely examined longitudinally. Indeed, adults who find it easy to depend on other adults retrospectively report more positive relationships with their parents during childhood (Collins & Read, 1990). The association between perceptions of positive caregiving experiences and current relationship function-

ing suggests that memories of past relationships may guide interpersonal behavior in adult relationships (Brumbaugh & Fraley, 2007; Pietromonaco & Barrett, 2000). Further, perceptions of different types of caregiver support (e.g., instrumental or emotional) earlier in development may be related to health in different ways, as they are in adult relationships (Wilson et al., 1999). Long-term longitudinal studies that include multiple assessment waves are needed to appropriately test mediating factors between early caregiving experiences and health across the life span (Cole & Maxwell, 2003).

Limitations

There are limitations to the current study that are worth acknowledging. Although longitudinal data are useful in character-

izing the association between perceptions of childhood caregiving and health, there may be a number of unmeasured variables that might explain the associations that we found in the current study. We attempted to rule out any health/depression-related explanations for the findings by adjusting for baseline health and depression in each model. Nevertheless, several possibilities for alternative explanations still exist. For example, because memories of parental care at least partially depend on current relationship quality (Dalton et al., 2006), and relationship quality across a variety of different relationships is associated with health (Chopik, 2017), current relationship quality might explain variation in both retrospective memories and health. Likewise, individual differences in cognitive ability may also affect both retrospective memories and health (e.g., Vuolo, Ferraro, Morton, & Yang, 2014). Future research can more directly rule out alternative explanations of the link between perceptions of childhood caregiving, depressive symptoms, and physical health in middle and late life. To properly address the issues of third variable explanations of the associations presented in this report, multiple assessments of each of these variables over longer intervals of time are necessary.

In some analyses, we found associations between perceptions of childhood caregiving and a summary index of chronic conditions. Worth noting, chronic conditions were rare in both samples, precluding our ability to examine individual chronic health conditions. Future research can investigate similar questions in samples that have more variability with respect to chronic health conditions. Knowing the exact health conditions affected by perceptions of caregiving can potentially lead to interventions that target specific health pathways to reduce chronic illness. Finally, many of the associations in the current study are relatively small in magnitude. With large sample sizes, smaller associations can be captured and more precise effect sizes can be estimated. However, there are likely large individual differences in the associations between perceptions of caregiving and health. Future research can examine moderators of the associations between perceptions of caregiving and health to reveal why perceptions might be more strongly associated with health for some individuals compared with others.

In the current study, memories of early parenting experiences were assessed in middle and older adulthood, generally at least 30 and 40 years after they occurred. Do these self-reported memories accurately reflect those early parenting experiences? Much of the research examining this question has found that, although there is occasionally some overlap between perceptions of early caregiving support and actual support experienced in childhood, the association between the two is often small or negligible (Booth-LaForce & Roisman, 2014; Reuben et al., 2016; Roisman & Haydon, 2011; Yarrow, Campbell, & Burton, 1970). This suggests that memories of parental support in childhood rarely resemble the actual support received when early experiences are measured retrospectively through evaluative judgments of recalled experiences (e.g., were they positive or negative?), as in the current studies. Although it appears that retrospective reports have little fidelity with respect to actual experiences, it could be the case that evaluative judgments about memories still exert a considerable influence over interpersonal behavior. For example, the process through which working models affect cognition, emotions, and interpersonal behavior is rooted in the accessibility of past relationship memories and their valence (Pietromonaco & Barrett, 2000). Further, Reuben et al.

(2016) compared the predictive ability of retrospectively and objectively reported adverse childhood experiences on various indices of health at age 38. Retrospective memories of childhood experiences indeed predicted life outcomes, controlling for whether these experiences objectively occurred or not. Worth noting, objective occurrence of childhood experiences still predicted life outcomes, but retrospective memories were *stronger* predictors of self-rated health, cognitive impairment, mental health, and quality of social relationships. Thus, retrospective accounts and perceptions of childhood experiences may be, in some cases, more closely related to interpersonal behavior, health, and well-being in adulthood than the objective events that happen to individuals. However, additional research that combines objectively assessed childhood events and retrospective evaluations of childhood events to examine important life outcomes is needed.

Conclusion

In conclusion, the current study provides evidence that perceptions of early caregiving experiences are associated with an individual's health and well-being, and these associations are largely invariant over time. Memories of positive caregiving experiences were associated with better health, fewer chronic illnesses, and fewer depressive symptoms longitudinally in both middle and older adulthood. Future research can address the methodological challenges involved in linking early caregiving perceptions to health and well-being across the life span, as well as the mechanisms that link these processes.

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