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Abstract

Retrospective self-report assessments of adults' childhood experiences with their parents are widely employed in psychological science, but such assessments are rarely validated against actual parenting experiences measured during childhood. Here, we leveraged prospectively acquired data characterizing mother–child and father–child relationship quality using observations, parent reports, and child reports covering infancy through adolescence. At age 26 years, approximately 800 participants completed a retrospective measure of maternal and paternal emotional availability during childhood. Retrospective reports of childhood emotional availability demonstrated weak convergence with composites reflecting prospectively acquired observations (R^2 s = .01–.05) and parent reports (R^2 s = .02–.05) of parenting quality. Retrospective parental availability was more strongly associated with prospective assessments of child-reported parenting quality (R^2 s = .24–.25). However, potential sources of bias (i.e., depressive symptoms and family closeness and cohesiveness at age 26 years) accounted for more variance in retrospective reports (39%–40%) than did prospective measures (26%), suggesting caution when using retrospective reports of childhood caregiving quality as a proxy for prospective data.

Keywords

childhood development, interpersonal relationships, relationship quality, adult development

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Across the full range of psychological science, scholars have shown interest in the degree to which childhood caregiving experiences shape mental and physical health in adulthood. In a high-impact article, Felitti et al. (1998) demonstrated that adverse childhood experiences that adults recalled—including childhood abuse/neglect, parental drug abuse, and interparental violence—were robustly associated with a broad variety of problematic adult outcomes, including alcoholism, depression, suicide attempts, poor self-rated health, and severe obesity—along with the diagnosis of serious adult illnesses, including cardiovascular disease, cancer, and liver disease. Such observations are not limited to adverse caregiving experiences. Chopik and Edelstein (2019) reported that the degree to which adults recalled

their parents as affectionate in childhood predicted adult mental and physical health trajectories in both the National Survey of Midlife Development in the United States and the Health and Retirement Study, two landmark investigations comprising thousands of adults studied longitudinally.

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One concern about influential studies such as these is that they take a retrospective approach to the measurement of parenting. Thus, the conclusions they reach about the significance of early caregiving experiences hinge crucially on the extent to which it is possible to capture valid reports of these experiences via retrospective assessment, sometimes decades after these events occurred (which itself can be problematic given that memory recall is subject to a number of well-known biases; Raphael, 1987). Of course, research that might be dispositive on this issue is incredibly resource intensive; such studies require the collection of prospective data on the quality of early parent–child interactions as those early caregiving experiences are unfolding in childhood, along with follow-ups in adulthood in which candidate retrospective measures are administered.

Despite the challenges inherent in such work, questions regarding the validity of retrospective assessments—and the value added of prospective assessments of childhood experiences—have been a mainstay of developmental psychology for almost its entire history as a discipline. Pyles and colleagues (1935) were possibly the first to provide insights into the limits of parents' retrospective reports about their children's early lives. In their landmark investigation on the accuracy of mothers' retrospective reports about their child's developmental milestones (e.g., weight at birth), Pyles and colleagues found only moderate agreement between retrospective data acquired from mothers when their child was 21 months old and hospital records acquired prospectively. This issue was later revisited in a now classic monograph over a more expansive developmental interval, in which Yarrow and colleagues (1970) concluded that prospective and retrospective data provided by mothers on even the most basic facts of early care were not interchangeable.

More recently, work in developmental and clinical science has focused on the validity of retrospective self-reports of childhood adversity, such as childhood maltreatment, and a recent quantitative review suggested that there is low agreement between retrospective self-report and prospectively acquired data on maltreatment ($\kappa = .19$; Baldwin et al., 2019; see also Reuben et al., 2016). Such work is not, on its own, conclusive about the validity of retrospective assessments of early caregiving for at least two reasons. First, in the case of maltreatment, it is not entirely clear that prospective data should be regarded as the “gold standard,” given evidence of underreporting of abuse, particularly as it is occurring (Newbury et al., 2018; Widom, 2019). Second, such work is largely limited to the domain of relatively adverse caregiving experiences. Research on the quality of parenting within the normative range and the extent to which retrospective self-reported assessments by adults

Statement of Relevance

Scholars and policy makers have long been interested in the influence of early caregiving experiences on adult's mental and physical health. However, researchers often rely on the use of adults' retrospective self-reports about caregiving experiences rather than observing individuals from childhood through to adulthood. This study assessed data from children's birth to the time they were 26 years old. In childhood, parent–child interactions were observed, and parents reported on their caregiving behaviors; in adolescence, participants reported on their received caregiving. At age 26, participants completed a retrospective self-report measure about their childhood caregiving experiences. We found that the retrospective reports were weakly associated with the actual caregiving measured in childhood. Instead, the self-reports were more aligned with current closeness with parents in adulthood and depressive symptoms. Our research suggests that retrospective self-reports of childhood caregiving should not be assumed to be a viable replacement for studying childhood experiences as they are unfolding.

converge with prospective assessments of those experiences is in short supply in the psychological literature (but see Henry et al., 1994)—despite the proliferation of studies assuming that such retrospective assessments are valid reflections of developmental history (Chopik & Edelstein, 2019; Neel et al., 2016; Sorhagen et al., 2019).

The Present Study

To address notable gaps in the literature on the validity of retrospective self-reports of normative childhood experiences, we drew on data from the National Institute of Child Health and Human Development (NICHD) Study of Early Child Care and Youth Development (SECCYD), a prospective, longitudinal study of a large, normative-risk sample of target participants and their families followed from birth to age 26 years. Although the primary goal of the SECCYD was to examine the long-term effects of early nonparental child care on subsequent development, the SECCYD also acquired extensive, repeated, and well-validated data on the parent–child relationship (data that were crucial for understanding the unique effects of child care). The assessments of childhood parenting in the SECCYD include what are widely viewed in modern developmental science as key

prospectively measured indicators of the parent–child relationship, including (a) direct observations of parent–child interactions from when the child was 6 months to 15 years old (Ainsworth et al., 1978), (b) parent-reported parent–child relationship quality from when the child was 54 months to 18 years old (Pianta, 1992, 1994), and (c) child-reported parent–child relationship quality from when the child was in sixth grade to when the child was 18 years old (Conger & Ge, 1999; Conger et al., 2002). The SECCYD also acquired parallel data on both maternal and paternal relationship quality from the time the child was 54 months old forward. Moreover, at age 26 years, participants completed a retrospective measure focusing on the emotional availability (i.e., sensitive supportiveness) of their primary maternal and paternal caregivers during childhood (Sorhagen et al., 2019). Thus, we were well-positioned to compare prospective and retrospective evidence about the quality of childhood parenting.

This analysis of the SECCYD was organized around three scientific aims. First, we examined the extent to which the retrospective reports of maternal and paternal emotional availability converged with prospectively documented evidence of mother–child and father–child relationship quality, respectively. Second, we examined the extent to which the retrospective measures demonstrated discriminant validity in relation to prospective data provided by the other parent in order to ensure that the retrospective reports of caregiving were specific to the mother and father and not just caregiving experiences more generally. Third, we explored the extent to which a small set of potential sources of bias in retrospective reporting of caregiving collected at the outcome assessment accounted for the retrospective reports relative to the prospective data on parent–child relationship quality. More specifically, four indicators measured concurrently (at age 26 years) with the retrospective reports were selected a priori: (a) current closeness to the mother, (b) current closeness to the father, (c) current family cohesiveness, and (d) depressive symptoms.

Memory is a reconstructive process and is therefore subject to a variety of biases in recall (Raphael, 1987). The measures of closeness and cohesiveness were included in this analysis because it is possible that retrospective measures of caregiving might be driven to a greater extent by adults' current perceptions of their relationships with parents than the actual quality of those experiences in childhood. Depressive symptoms were selected in light of a vast literature of clinical and developmental psychology, leveraging both experimental mood-induction methods and longitudinal studies, suggesting an important role for current depressive symptoms in biasing retrospective reporting about early

caregiving experiences (Gillham et al., 2007; Roisman et al., 2014).

Method

Participants

Participants were drawn from the SECCYD, an ongoing longitudinal study of 1,364 target participants and their families sampled from 10 sites across the United States and followed from participants' birth to when they were 26 years old (for detailed information, see NICHD Early Child Care Research Network, 2005). The subsample for the present study consisted of 805 participants who completed the Emotional Availability Scale (Sorhagen et al., 2019) at the 26-year follow-up assessment for their primary caregiver (mother or father) in childhood. In the analysis sample, participants were 53% female and 81% White non-Hispanic. Participants had an average income-to-needs ratio of 4.3 (range = 0.3–23.1, $SD = 3.1$). The income-to-needs ratio (which was collected 12 times from when participants were 1 month old to 15 years old and averaged into one composite measure) was operationalized as family income divided by the year-specific poverty threshold for the appropriate family size during each assessment, consistent with the definitions used by the U.S. Census Bureau (2019). Average maternal education level was 14.7 years (range = 7–21, $SD = 2.3$).

Compared with participants in the analytic sample ($n = 805$), participants lost to attrition ($n \sim 559$) were significantly more likely to be male, $t(1209) = 4.12$, $p < .001$, $r = .11$; were more likely to be non-White, $t(1065) = 5.08$, $p < .001$, $r = .14$; had mothers with significantly less education, $t(1174) = 8.14$, $p < .001$, $r = .22$; and had a significantly lower income-to-needs ratio, $t(1271) = 7.64$, $p < .001$, $r = .20$ (equal variances not assumed).

Measures

See Table 1 for a breakdown of each measure by child's age and informant.

Retrospective measure. The Emotional Availability Scale (Sorhagen et al., 2019) is a 10-item retrospective self-report measure that was developed on the basis of the work of Ainsworth et al. (1978) and Main et al. (1985). The measure assesses the extent to which an individual's caregiver was sensitive, responsive, and available in childhood via retrospective reporting. Participants rated items such as "As a child, my [mother/father] was there for me when I needed [her/him]," "When I was upset as a child, I would go to my [mother/father]," "When I was sick or hurt as a child, my [mother/father] took care of

Table 1. Measures by Child's Age and Informant

Measure	Child age or grade									
	6, 15, 24, 36 months old	54 months old	Grade 1	Grade 3	Grade 4	Grade 5	Grade 6	15 years old	18 years old	26 years old
Parent-child observations	Mother	Mother, father	Mother, father	Mother, father		Mother, father		Mother, father		
Parent-reported closeness and conflict		Mother, father	Mother, father	Mother, father	Mother, father	Mother, father	Mother, father	Mother, father	Mother, father	
Child-reported warmth/support and hostility							Child	Child	Child	
Retrospective emotional availability										Child
Family closeness										Child
Family cohesiveness										Child
Depressive symptoms										Child

Note: Parent-child observations were done with the study child and each parent separately in prospectively assessed interaction tasks. Parent-reported closeness and conflict with the child were both prospectively assessed. Child-reported warmth/support and hostility were prospectively assessed with respect to both parents. Retrospective emotional availability was a measure of an individual's early caregiving experiences with their mother and father. Family closeness was rated by participants at the 26-year assessment. Family cohesiveness was derived from participants' feelings of current emotional support from and enjoyment in the broader family unit at the 26-year assessment. Depressive symptoms were self-reported by participants at the 26-year assessment.

me," and "As a child, my [mother/father] and I had special things that we did together" on a 5-point Likert-type scale; higher values indicate greater emotional availability. At age 26 years, participants completed the Emotional Availability Scale with respect to their childhood experiences with their maternal ($\alpha = .87$) and paternal ($\alpha = .89$) caregivers.

Prospective measures. Prospective assessments of the quality of early caregiving were selected for this analysis a priori on the basis of the most well-validated observational, parent-report, and child-report parenting data available on the SECCYD cohort across multiple assessments, so those data could be aggregated to maximize the reliability and validity of our overall assessments of early maternal and paternal caregiving by informant. In addition, paralleling the methodology of Booth-LaForce and Roisman (2014), the focus of this analysis required a clear distinction between data acquired from maternal and paternal caregivers, but the standard SECCYD variables beginning when children are 54 months old distinguish between primary caregivers (i.e., mostly maternal figures but some fathers) and secondary caregivers (mostly fathers, but also others, including maternal grandparents). For this reason, all variables labeled "mother" or

"maternal report" and all variables referring to observations of the mother-child interactions include female primary caregivers only (paternal figures were removed from relevant data). Similarly, all variables labeled "father" or "paternal report" and all variables referring to observations of the father-child interactions include male primary caregivers only (nonpaternal figures were removed).

Observations of parental sensitivity. Maternal sensitivity was assessed via mother-child interactions during 15-min semistructured tasks when children were 6, 15, 24, 36, and 54 months old; were in Grades 1, 3, and 5; and were 15 years old. At each assessment point, the children were videotaped engaging in tasks at the zone of proximal development while primary caregivers provided assistance at the younger ages; at older ages, participants engaged in joint tasks, including discussion tasks. Tasks were designed to be developmentally appropriate. For example, at the 6-month assessment, the interaction was divided into two segments: 7 to 8 min during which the mother chose toys to use while interacting with the child and 7 to 8 min during which the mother was given a standard set of toys (e.g., rattle with faces) to use while interacting with the child. At the 15-, 24-, and 36-month assessments, mothers were asked to provide their child

with toys from three containers in a set order. At the 15- and 24-month assessments, the toys included a storybook (which differed at 15 and 24 months) in the first container, a toy stove in the second container, and a toy house in the third container. At the 36-month assessment, the toys included washable markers in the first container, dress-up clothes in the second container, and Duplo blocks in the third container. At the 54-month assessment, the tasks included completing a maze using an Etch A Sketch, building a series of identical towers from blocks of varying shapes and sizes, and playing together with six hand puppets.

In Grade 1, the activities included (a) drawing a house and tree together using an Etch A Sketch with instructions that the mother was to control one knob and the child was to control the other; (b) matching geometric blocks to pictured block patterns, with the mother assisting as needed; and (c) playing a simple but competitive card game. The observations during Grade 3 involved (a) a discussion task during which the mother and child were asked to discuss their views of “rules” chosen randomly about what children and parents should do and (b) an activity that involved sorting and sequencing cards illustrating a birthday party or haircut. In Grade 5, the two activities were (a) a discussion task in which the parent and child discussed issues regarding potential parent–child disagreements that they identified jointly (e.g., chores, homework, watching TV) and (b) an activity in which the parent and child had 7 min to construct a “tower” using provided supplies (Model Magic, toothpicks, four tongue depressors, four rubber bands, and a ruler). At the 15-year assessment, maternal sensitivity was assessed in the context of an 8-min home discussion of one or two areas of disagreement between the adolescent and mother (e.g., chores, homework).

Measures of paternal sensitivity were added to the SECCYD common protocol beginning at the 54-month assessment. Paternal sensitivity assessments from the 54-month through 15-year assessments were conducted in parallel fashion to those described above for maternal sensitivity. Sensitivity of mother–child and father–child interactions at each assessment was rated by trained and reliable coders from the videotaped semi-structured procedures (for more detailed information on the coding scales, see Haltigan et al., 2013). Following previous work in the SECCYD (Haltigan et al., 2019; Steele et al., 2014) and to maximize the reliability and validity of this assessment of childhood experiences, we first *z*-standardized and then averaged sensitivity scores at all ages to create the observed maternal sensitivity (mean $r = .35$, range = .20–.48, standardized $\alpha = .81$) and observed paternal sensitivity (mean $r = .32$, range = .25–.41, standardized $\alpha = .70$) composites.

Parent-reported closeness and conflict. The Child-Parent Relationship Scale is a 15-item parent-report measure adapted from the Student-Teacher Relationship Scale (Pianta, 1992, 1994). Parents report their feelings and beliefs about their relationship with their child and about the child’s behavior toward the parent. The Child-Parent Relationship Scale is composed of two subscales—Closeness With Child and Conflict With Child—and includes items such as “I share an affectionate, warm relationship with my child” and “My child and I always seem to be struggling with each other.” Items are rated on a 5-point Likert-type scale ranging from *definitely does not apply* to *definitely applies*. Both mothers and fathers completed the Child-Parent Relationship Scale at eight assessment points throughout study children’s development: age 54 months; Grades 1, 3, 4, 5, and 6; and ages 15 and 18 years. Mother-reported closeness and mother-reported conflict were each averaged across the assessments to create a composite measure of closeness (mean $r = .45$, range = .22–.68, standardized $\alpha = .86$) and conflict (mean $r = .61$, range = .39–.79, standardized $\alpha = .92$). Similar father-reported scores were computed (closeness: mean $r = .51$, range = .30–.68, standardized $\alpha = .90$; conflict: mean $r = .57$, range = .37–.73, standardized $\alpha = .91$). Again, composites were created to maximize the validity and reliability of this assessment of early caregiving.

Child-reported parental warmth/support and hostility. The Parental Warmth, Support and Hostility Scale (PWSH; Conger & Ge, 1999; Conger et al., 2002) is a 38-item (19 mother items, 19 father items) measure that asks children to rate how often certain behaviors occur in their relationships with both the mother and the father. Items are rated on a 4-point Likert-type scale (from *never* to *always*) and include “When you and your [mother/father] spend time talking or doing things together, how often does your [mother/father] help you do something that is important to you?” and “When you and your [mother/father] spend time talking or doing things together, how often does your [mother/father] get angry at you?” The PWSH contains two subscales: Warmth/Support and Hostility. Higher scores reflect greater warmth/support and greater hostility, respectively. The study children completed the PWSH at the Grade 6, 15-year, and 18-year assessments (note that at ages 15 and 18 years, a 34-item [17 items each for mother and father] version of the PWSH was used). Child-reported feelings of warmth/support from and hostility with the mother were averaged across the three assessments to create one composite measure of maternal warmth/support (mean $r = .47$, range = .42–.54, standardized $\alpha = .72$) and maternal hostility (mean $r = .43$, range = .37–.52, standardized $\alpha = .71$). Similarly, child-reported warmth/support and hostility with the father were averaged across the three

assessments to create one composite measure of paternal warmth/support (mean $r = .43$, range = .38–.49, standardized $\alpha = .70$) and paternal hostility (mean $r = .44$, range = .39–.51, standardized $\alpha = .72$).

Measures at the 26-year assessment. Measures were selected a priori from the 26-year assessment (concurrent with the retrospective measure of emotional availability) in order to examine indicators of current closeness with caregivers and current closeness in the target participant's family, along with depressive feelings, which have been associated with biased recall of early experiences.

Closeness with parents. Participants rated their current closeness with both their mother and father using a one-item measure per parent: "Right now, how close do you feel to your [mother/father]?" Responses were given on a 5-point Likert-type scale ranging from *not at all close* to *extremely close*.

Family cohesiveness. Family cohesiveness was assessed using a three-item measure adapted from the Michigan Study of Adolescent Life Transitions (<http://garp.education.uci.edu/msalt.html>). This measure assesses overall feelings of current emotional support and enjoyment in the broader family unit, including parents and siblings. Items are rated on a 5-point Likert-type scale; higher scores indicate more current family cohesiveness ($\alpha = .89$). The scale includes items such as "Members of my family are very close and get along very well."

Current depressive symptoms. Current depressive symptoms were assessed using the Center for Epidemiological Studies-Depression (CES-D) Scale (Corcoran & Fischer, 1987; Radloff, 1977). The CES-D is a 20-item inventory of the major symptoms of depression. Participants are presented with a list of 20 feelings and behaviors and are asked to rate how often in the past week they may have felt or behaved in this manner. The inventory includes items such as "I was bothered by things that usually don't bother me" and "I did not feel like eating; my appetite was poor." Items were rated on a 4-point Likert-type scale ranging from *rarely or none of the time (less than 1 day)* to *most or all of the time (5–7 days)*. Higher values indicate more depressive symptoms. The 20 items were properly reflected and averaged to create a measure of overall depressive symptoms ($\alpha = .94$).

Results

Correlations among study variables are presented in Table 2. Multiple regression analyses were used to address the research questions related to convergent and discriminant validity of retrospective self-reports of maternal and paternal childhood emotional availability.

To what extent do retrospective reports of maternal and paternal emotional availability converge with prospectively documented evidence of the quality of mother-child and father-child caregiving?

First, analyses were run to examine the extent to which retrospective measures of emotional availability converged with prospectively documented evidence of caregiving in order to understand the extent to which retrospective measures reflected those childhood experiences as they unfolded in the early life course. Multiple regression analyses were conducted in which the degree to which prospective measures of caregiving quality specific to each caregiver (i.e., observed sensitivity, parent reports of closeness and conflict with the study child; child reports of warmth/support and hostility) predicted the participants' 26-year retrospective reports of mothers' and fathers' emotional availability during childhood. In each set, a final, omnibus regression was performed to examine the degree to which all prospective measures of mother-child and father-child caregiving quality accounted for variation in retrospective reports of maternal and paternal emotional availability, respectively.

Results of the analyses examining the convergent validity of retrospective reports of maternal emotional availability are reported in Table 3. Separately, observed maternal sensitivity measured when children were between the ages of 6 months and 15 years explained 4% of the variance in retrospective reports of maternal emotional availability. Mother reports of closeness and conflict explained 2% of the variance in retrospective reports of maternal emotional availability, and child reports of maternal warmth/support and hostility explained 24%. In a final, omnibus regression, the prospective data on mother-child caregiving quality explained approximately 25% of the variance in retrospective reports of maternal emotional availability. Although maternal sensitivity was uniquely associated with maternal emotional availability in this regression, almost all of the convergence of retrospective reports of early caregiving with prospective data was accounted for by prospective child-reported parent relationship quality.

Results from analyses examining the paternal data (outlined in Table 4) revealed that, separately, observed paternal sensitivity explained 1% of the variance in retrospective reports of paternal emotional availability, paternal reports of closeness and conflict explained 5%, and child-reported paternal warmth/support and hostility explained 26%. Altogether, prospective reports of father-child caregiving quality explained approximately 24% of the variance in retrospective reports of paternal

Table 2. Bivariate Correlations Among All Study Variables

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. Maternal emotional availability	—															
2. Paternal emotional availability	0.35**	—														
3. Observed maternal sensitivity	0.21**	0.21**	—													
4. Mother-reported closeness	0.11**	0.03	0.15**	—												
5. Mother-reported conflict	-0.13**	-0.05	-0.19**	-0.37**	—											
6. Child-reported maternal warmth/support	0.48**	0.17**	0.11**	0.27**	-0.22**	—										
7. Child-reported maternal hostility	-0.33**	-0.16**	-0.24**	-0.18**	0.27**	-0.57**	—									
8. Observed paternal sensitivity	0.12**	0.11**	0.41**	0.07	-0.16**	0.05	-0.10*	—								
9. Father-reported closeness	0.10**	0.14**	0.17**	0.22**	-0.24**	0.11**	-0.11**	0.19**	—							
10. Father-reported conflict	-0.10**	-0.20**	-0.16**	-0.19**	0.51**	-0.14**	0.16**	-0.26**	-0.26**	—						
11. Child-reported paternal warmth/support	0.25**	0.51**	0.16**	0.17**	-0.11**	0.48**	-0.29**	0.15**	0.22**	-0.23**	—					
12. Child-reported paternal hostility	-0.12**	-0.13**	-0.09*	-0.07	0.16**	-0.27**	0.46**	-0.11**	-0.13**	0.13**	-0.35**	—				
13. Current maternal closeness	0.56**	0.20**	0.10**	0.14**	-0.11**	0.37**	-0.21**	0.07	0.05	-0.07	0.16**	-0.08*	—			
14. Current paternal closeness	0.29**	0.65**	0.22**	0.03	-0.07	0.16**	-0.16**	0.13**	0.13**	-0.19**	0.43**	-0.14**	0.34**	—		
15. Family cohesiveness	0.49**	0.38**	0.19**	0.10**	-0.13**	0.34**	-0.22**	0.09*	0.12**	-0.17**	0.30**	-0.12**	0.56**	0.46**	—	
16. Depressive symptoms	-0.30**	-0.26**	-0.11**	-0.05	0.16**	-0.17**	0.25**	-0.08*	-0.11**	0.18**	-0.21**	0.14**	-0.24**	-0.29**	-0.22**	—
<i>M</i>	4.04	3.36	0.00	38.06	17.68	29.78	11.58	0.00	35.99	17.35	27.65	11.12	4.32	3.91	3.98	1.74
<i>SD</i>	0.74	0.94	1.00	2.58	5.29	4.33	2.29	1.00	4.33	5.09	5.70	2.41	1.01	1.25	0.98	0.60
<i>n</i>	805	799	805	798	799	803	803	705	738	738	794	794	775	748	804	804

Note: Maternal and paternal emotional availability are retrospective measures reporting on an individual's early caregiving experiences. Observed maternal and paternal sensitivity were prospectively assessed via an interaction task between the participant and the mother or father: This is a composite variable from the 6-month to 15-year child assessments for mothers and the 54-month to 15-year child assessments for fathers. Mother- and father-reported closeness and conflict with their child were prospectively assessed from the 54-month to 18-year assessments. Child-reported maternal and paternal warmth/support and hostility were prospectively assessed from Grade 6 and the ages of 15 and 18 years. Current ratings of closeness to parents were reported at the 26-year assessment. Family cohesiveness was derived from participants' feelings of current emotional support from and enjoyment in the broader family unit at the 26-year assessment. Depressive symptoms were self-reported by participants at the 26-year assessment.

* $p < .05$. ** $p < .01$.

Table 3. Results From the Linear Regressions Examining the Extent to Which Prospectively Acquired Mother–Child Relationship Quality Explained Variation in Retrospective Self-Reports of Childhood Maternal Emotional Availability at the 26-Year Assessment

Variable	Observational data only (<i>N</i> = 805; <i>R</i> ² = .04)		Mother report only (<i>n</i> = 798; <i>R</i> ² = .02)		Child report only (<i>n</i> = 803; <i>R</i> ² = .24)		Omnibus (<i>n</i> = 796; <i>R</i> ² = .25)	
	β	<i>SE</i>	β	<i>SE</i>	β	<i>SE</i>	β	<i>SE</i>
Observed maternal sensitivity	0.21**	0.03					0.15**	0.02
Mother-reported closeness			0.07*	0.01			−0.05	0.01
Mother-reported conflict			−0.10**	0.01			−0.01	0.01
Child-reported maternal warmth/support					0.44**	0.01	0.45**	0.01
Child-reported maternal hostility					−0.08*	−0.08	−0.04	0.01

Note: The dependent variable in these analyses was maternal emotional availability reported by the target participants at the age of 26 years. Observed maternal sensitivity is a composite assessed from the 6-month to 15-year child assessments. Mother-reported closeness and conflict with the study child are composites assessed from the 54-month to 18-year assessments. Child-reported feelings of maternal warmth/support and hostility are composites assessed from Grade 6 and ages 15 and 18 years.

p* < .05. *p* < .01.

emotional availability. Once again, the vast majority of this association was attributable to prospective child-reported parent relationship quality.

Because the child-reported prospective parenting data were available only at Grade 6 and ages 15 and 18 years (because such data can arguably be validly acquired only from older children and adolescents), sensitivity analyses were conducted wherein we recomputed the observational-data and parent-report prospective-data composites using only data roughly contemporaneous with the child-report assessments (i.e., Grade 5 and age 15 years for the mother–child and father–child observational data; Grade 6 and ages 15 and 18 years for maternal- and paternal-reported closeness and conflict). Next, regression analyses identical to those outlined in Tables 3 and 4 were performed

with these variables. Results from these sensitivity analyses were not materially different from those described above (see Tables S1 and S2 in the Supplemental Material available online).

To what extent do retrospective reports of caregiving demonstrate discriminant validity in relation to prospective data on the quality of caregiving provided by the other parent?

Tests of discriminant validity were run to examine the extent to which the retrospectively measured emotional availability with a given caregiver (e.g., mother) was

Table 4. Results From the Linear Regressions Examining the Extent to Which Prospectively Acquired Father–Child Relationship Quality Explained Variation in Retrospective Self-Reports of Childhood Paternal Emotional Availability at the 26-Year Assessment

Variable	Observational data only (<i>n</i> = 700; <i>R</i> ² = .01)		Father report only (<i>n</i> = 732; <i>R</i> ² = .05)		Child report only (<i>n</i> = 790; <i>R</i> ² = .26)		Omnibus (<i>n</i> = 696; <i>R</i> ² = .24)	
	β	<i>SE</i>	β	<i>SE</i>	β	<i>SE</i>	β	<i>SE</i>
Observed paternal sensitivity	0.11**	0.03					0.02	0.03
Father-reported closeness			0.09*	0.01			−0.02	0.01
Father-reported conflict			−0.18**	0.01			−0.09*	0.01
Child-reported paternal warmth/support					0.52**	0.01	0.47**	0.01
Child-reported paternal hostility					0.05	0.01	0.01	0.01

Note: The dependent variable in these analyses was paternal emotional availability reported by the target participants at the age of 26 years. Observed paternal sensitivity is a composite assessed from the 54-month to 15-year child assessments. Father-reported closeness and conflict with the study child are composites assessed from the 54-month to 18-year assessments. Child-reported feelings of paternal warmth/support and hostility are composites assessed from Grade 6 and ages 15 and 18 years.

p* < .05. *p* < .01.

Table 5. Results From the Hierarchical Regression Examining the Discriminant Validity of Retrospective Self-Reported Childhood Maternal Emotional Availability Assessed at Age 26 Years in Relation to Prospectively Acquired Father–Child Relationship Quality, Controlling for Prospectively Acquired Indicators of Mother–Child Relationship Quality

Step and variable	<i>b</i>	<i>SE</i>	β	<i>t</i>	<i>p</i>
Step 1 ($R^2 = .25$)					
Observed maternal sensitivity	0.11	0.03	0.15	4.29	.00
Mother-reported closeness	−0.01	0.01	−0.05	−1.30	.20
Mother-reported conflict	0.00	0.01	0.00	0.08	.94
Child-reported maternal warmth/support	0.07	0.01	0.44	10.55	.00
Child-reported maternal hostility	−0.02	0.01	−0.05	−1.22	.22
Step 2 ($R^2 = .26$)					
Observed maternal sensitivity	0.09	0.03	0.13	3.42	.00
Mother-reported closeness	−0.01	0.01	−0.05	−1.22	.22
Mother-reported conflict	0.00	0.01	0.00	0.10	.92
Child-reported maternal warmth/support	0.07	0.01	0.43	8.89	.00
Child-reported maternal hostility	−0.02	0.02	−0.08	−1.62	.11
Observed paternal sensitivity	0.04	0.03	0.05	1.43	.15
Father-reported closeness	0.00	0.01	−0.02	−0.66	.51
Father-reported conflict	0.00	0.01	0.00	−0.08	.94
Child-reported paternal warmth/support	0.00	0.01	0.02	0.41	.68
Child-reported paternal hostility	0.01	0.01	0.05	1.15	.25

Note: $n = 693$. The dependent variable in these analyses was maternal emotional availability reported by the target participants at the 26-year assessment. Observed maternal sensitivity is a composite assessed from the 6-month to 15-year child assessments. Mother- and father-reported closeness and conflict with the study child are composites assessed from the 54-month to 18-year assessments. Child-reported feelings of maternal and paternal warmth/support and hostility are composites assessed from Grade 6 and ages 15 and 18 years. Observed paternal sensitivity is a composite assessed from the 54-month to 15-year assessments. From Step 1 to Step 2, $\Delta R^2 = .004$, $p = .59$.

associated with prospectively documented experiences with that caregiver or whether the measure captured caregiving experiences within the family more generally. In each analysis, the opposite caregiver was controlled for because maternal and paternal caregiving experiences are not independent (see Table 2). To address this question, we built on the omnibus regressions presented above in two-step hierarchical regressions (see Tables 5 and 6). Specifically, to examine the degree to which retrospective reports of maternal emotional availability demonstrated discriminant validity in relation to the prospective data on paternal caregiving, in Step 1, we entered the entire set of prospective indicators of mother–child caregiving quality (i.e., observed sensitivity, mother reported closeness and conflict, and child-reported warmth/support and hostility). In Step 2, we entered the entire set of prospective indicators of father–child caregiving quality. Results presented in Table 5 demonstrated strong discriminant validity: None of the father–child prospective measures were uniquely associated with retrospectively assessed maternal emotional availability (from Step 1 to Step 2: $\Delta R^2 = .004$, $p = .59$).

The order of these regression steps was reversed to examine the discriminant validity of the retrospective

reports of paternal emotional availability in relation to prospective indicators of mother–child caregiving quality. As reported in Table 6, retrospective reports of paternal emotional availability had relatively strong discriminant validity in relation to prospective mother–child relationship quality, although the maternal data did explain an additional 2% of the variation in retrospective reports of paternal emotional availability (from Step 1 to Step 2: $\Delta R^2 = .02$, $p < .01$).

Relative to the prospective data on mother–child and father–child relationship quality, to what extent do participants’ 26-year assessments of family closeness and mood states account for the variance in the retrospective reporting of childhood parental emotional availability?

To examine the extent to which retrospective measures of emotional availability are potentially confounded by potential sources of bias (as previous evidence has suggested; Raphael, 1987; Roisman et al., 2014), we

Table 6. Results From the Hierarchical Regression Examining the Discriminant Validity of Retrospective Self-Reported Childhood Paternal Emotional Availability Assessed at Age 26 Years in Relation to Prospectively Acquired Mother–Child Relationship Quality, Controlling for Prospectively Acquired Indicators of Father–Child Relationship Quality

Step and variable	<i>b</i>	<i>SE</i>	β	<i>t</i>	<i>p</i>
Step 1 ($R^2 = .24$)					
Observed paternal sensitivity	0.02	0.03	0.02	0.61	.54
Father-reported closeness	0.00	0.01	−0.02	−0.42	.67
Father-reported conflict	−0.02	0.01	−0.09	−2.56	.01
Child-reported paternal warmth/support	0.08	0.01	0.47	12.42	.00
Child-reported paternal hostility	0.00	0.01	0.01	0.16	.88
Step 2 ($R^2 = .26$)					
Observed paternal sensitivity	−0.02	0.03	−0.02	−0.65	.52
Father-reported closeness	0.00	0.01	−0.01	−0.25	.80
Father-reported conflict	−0.02	0.01	−0.12	−3.06	.00
Child-reported paternal warmth/support	0.08	0.01	0.50	11.37	.00
Child-reported paternal hostility	0.02	0.02	0.04	1.00	.32
Observed maternal sensitivity	0.10	0.03	0.11	2.84	.01
Mother-reported closeness	−0.02	0.01	−0.05	−1.48	.14
Mother-reported conflict	0.01	0.01	0.07	1.69	.09
Child-reported maternal warmth/support	−0.02	0.01	−0.08	−1.71	.09
Child-reported maternal hostility	−0.04	0.02	−0.09	−1.91	.06

Note: $n = 690$. The dependent variable in these analyses was paternal emotional availability reported by the target participants at the 26-year assessment. Observed paternal sensitivity is a composite assessed from the 54-month to 15-year child assessments. Mother- and father-reported closeness and conflict with the study child are composites assessed from the 54-month to 18-year assessments. Child-reported feelings of maternal and paternal warmth/support and hostility are composites assessed from Grade 6 and ages 15 and 18 years. Observed maternal sensitivity is a composite assessed from the 6-month to 15-year assessments. From Step 1 to Step 2, $\Delta R^2 = .02$, $p < .01$.

examined measures of family closeness and depressive symptoms—concurrently assessed with retrospective measures of emotional availability. As shown in Table 7, four self-report variables measured contemporaneously at the 26-year assessment along with the measure of maternal emotional availability in childhood—current closeness with the mother, current closeness with the father, family cohesiveness, and depressive symptoms—on their own explained 39% of the variance in the retrospective report of maternal emotional availability. Of note, the addition of the prospective measures explained an additional 8% ($p < .01$) of the variance in maternal emotional availability. In notable contrast, when the order of these blocks was reversed (see Table S3 in the Supplemental Material), data from the 26-year assessment explained 21% ($p < .01$) more of the variance in retrospective reports of maternal emotional availability above and beyond the prospective indicators of maternal caregiving. Overall, these regressions showed that the entire set of prospective indicators of maternal caregiving plus the four concurrent assessments of closeness and depressive symptoms explained 47% of the variation in maternal emotional availability.

Similarly, the same set of variables measured at the 26-year assessment (parental and family closeness and depressive symptoms) explained 40% of the variance in paternal emotional availability (see Table 8, Step 1). Inclusion of the prospective measures in Step 2 explained an additional 7% ($p < .01$) of the variance in paternal emotional availability. When the order of these blocks was reversed (see Table S4 in the Supplemental Material), data from the 26-year assessment explained more variation in paternal emotional availability (21%, $p < .01$) above and beyond the prospective data. Overall, these regressions revealed that the entire set of prospective indicators of father–child caregiving quality plus the four 26-year variables of closeness and depressive symptoms explained 47% of the total variation in retrospective reports of paternal emotional availability.

Discussion

The present study provides some of the first evidence from a large-sample prospective, longitudinal investigation that retrospective reports of parental emotional

Table 7. Results From the Hierarchical Regression of Retrospective Self-Reported Childhood Maternal Emotional Availability Assessed at Age 26 Years on Age-26 Maternal and Paternal Closeness, Family Cohesiveness, and Depressive Symptoms, Separately and in Combination With Prospectively Acquired Indicators of Mother–Child Relationship Quality

Step and variable	<i>b</i>	<i>SE</i>	β	<i>t</i>	<i>p</i>
Step 1 ($R^2 = .39$)					
Current maternal closeness	0.30	0.03	0.41	11.58	.00
Current paternal closeness	−0.01	0.02	−0.01	−0.41	.69
Family cohesiveness	0.17	0.03	0.22	6.08	.00
Depressive symptoms	−0.21	0.04	−0.17	−5.41	.00
Step 2 ($R^2 = .47$)					
Current maternal closeness	0.26	0.03	0.35	10.31	.00
Current paternal closeness	−0.02	0.02	−0.03	−0.78	.44
Family cohesiveness	0.12	0.03	0.16	4.42	.00
Depressive symptoms	−0.17	0.04	−0.14	−4.49	.00
Observed maternal sensitivity	0.07	0.02	0.10	3.37	.00
Mother-reported closeness	−0.01	0.01	−0.04	−1.19	.24
Mother-reported conflict	0.00	0.00	0.02	0.67	.50
Child-reported maternal warmth/support	0.05	0.01	0.26	7.20	.00
Child-reported maternal hostility	−0.01	0.01	−0.05	−1.27	.20

Note: $n = 720$. The dependent variable in these analyses was maternal emotional availability reported by the target participant at the 26-year assessment. Current maternal and paternal closeness were rated by participants on a scale from 1 to 5. Family cohesiveness was derived from participants' feelings of current emotional support and enjoyment in the broader family unit at the 26-year assessment. Depressive symptoms were self-reported by participants at the 26-year assessment. Observed maternal sensitivity is a composite assessed from the 6-month to 15-year child assessments. Mother-reported closeness and conflict with the study child are composites assessed from the 54-month to 18-year assessments. Child-reported feelings of maternal warmth/support and hostility are composites assessed from Grade 6 and ages 15 and 18 years. From Step 1 to Step 2, $\Delta R^2 = .08$, $p < .01$.

availability provided by 26-year-old adults converge only weakly with prospectively acquired observations and parent reports of parenting—though they were notably more strongly associated with prospectively acquired child reports of parenting. Retrospective reports did demonstrate strong discriminant validity in relation to prospective data on caregiving provided by the other parent. However, when we examined four concurrently measured potential sources of bias in retrospective reporting of early caregiving, this set of variables accounted for more variance in retrospective reports than did prospective measures of caregiving quality. Importantly, these measures of potential bias were completed by the same informant at the same time as the retrospective measures, and such associations thus may reflect shared method variance.

Taken together, these findings suggest that retrospective measures of caregiving are not a strong proxy for prospectively assessed caregiving quality, particularly the kinds of direct observations that are a gold standard in developmental psychology (Booth-LaForce et al., 2014). Moreover, retrospective assessments of caregiving may be driven to a greater extent by adults'

current perceptions of their relationships with parents and current mood than by the actual quality of those experiences in childhood, findings consistent with a large literature on depressogenic biases in retrospective reporting (e.g., Roisman et al., 2014; Sheikh, 2018).

The present study builds on prior research (i.e., Pyles et al., 1935; Yarrow et al., 1970) investigating the validity of retrospective reports by mothers about the objective facts of early caregiving. Importantly, the present results also converges with recent findings from the maltreatment literature (e.g., Baldwin et al., 2019; Newbury et al., 2018; Reuben et al., 2016) to demonstrate that retrospective reports of caregiving in both the atypical and normative range converge in only limited ways with data acquired prospectively.

Strengths and limitations

The SECCYD contains extensively validated, multi-method, multiinformant, and prospectively acquired measures of caregiving quality in a normative-risk sample from birth to 18 years and thus is an arguably ideal

Table 8. Results From the Hierarchical Regression of Retrospective Self-Reported Childhood Paternal Emotional Availability Assessed at Age 26 Years on Age-26 Maternal and Paternal Closeness, Family Cohesiveness, and Depressive Symptoms, Separately and in Combination With Prospectively Acquired Indicators of Father-Child Relationship Quality

Step and variable	<i>b</i>	<i>SE</i>	β	<i>t</i>	<i>p</i>
Step 1 ($R^2 = .40$)					
Current maternal closeness	-0.08	0.03	-0.09	-2.26	.02
Current paternal closeness	0.45	0.03	0.59	16.46	.00
Family cohesiveness	0.08	0.04	0.08	2.09	.04
Depressive symptoms	-0.13	0.05	-0.09	-2.62	.01
Step 2 ($R^2 = .47$)					
Current maternal closeness	-0.07	0.03	-0.08	-2.21	.03
Current paternal closeness	0.38	0.03	0.49	13.78	.00
Family cohesiveness	0.04	0.04	0.04	1.01	.32
Depressive symptoms	-0.10	0.05	-0.07	-2.15	.03
Observed paternal sensitivity	-0.01	0.03	-0.01	-0.33	.74
Father-reported closeness	-0.01	0.01	-0.04	-1.38	.17
Father-reported conflict	-0.01	0.01	-0.06	-1.94	.05
Child-reported paternal warmth/support	0.05	0.01	0.30	8.17	.00
Child-reported paternal hostility	0.01	0.01	0.03	0.84	.40

Note: $n = 640$. The dependent variable in these analyses was paternal emotional availability reported by the target participant at the 26-year assessment. Current maternal and paternal closeness were rated by participants on a scale from 1 to 5. Family cohesiveness was derived from participants' feelings of current emotional support and enjoyment in the broader family unit at the 26-year assessment. Depressive symptoms were self-reported by participants at the 26-year assessment. Observed paternal sensitivity is a composite assessed from the 54-month to 15-year child assessments. Father-reported closeness and conflict with the study child are composites assessed from the 54-month to 18-year assessments. Child-reported feelings of paternal warmth/support and hostility are composites assessed from Grade 6 and ages 15 and 18 years. From Step 1 to Step 2, $\Delta R^2 = .07$, $p < .01$.

context in which to examine the validity of retrospective reports of caregiving acquired in young adulthood. Despite these notable strengths, however, this analysis was limited to one 10-item retrospective measure of caregiving. Because it is possible that other measures of retrospective caregiving might converge better with prospective assessments, future research would benefit from the examination of the validity of a broader set of retrospective measures of caregiving across a range of large and, ideally, representative samples.

In addition, previous studies (Danese & Widom, 2020; Newbury et al., 2018) have demonstrated that retrospective reports of caregiving experiences may be uniquely predictive of important adult outcomes (e.g., psychopathology) above and beyond prospective evidence, suggesting that retrospective measures do have utility (see also Hardt & Rutter, 2004). In the current sample, because the retrospective assessment was administered at the most recently completed assessment, we were unable to examine its predictive validity. Nonetheless, additional data collection on the SECCYD sample is currently under way; thus, relevant analyses can be conducted when these data are available.

Future directions

Limitations notwithstanding, we believe that these analyses provide compelling evidence that researchers investigating the legacy of early experiences should not assume that retrospective measures of caregiving can be used as a proxy for the quality of childhood relationships with primary caregivers. Thus, scholars interested in how caregiving might contribute to adult mental and physical health outcomes would benefit from partnering with developmental scientists who are already conducting prospective, longitudinal work. Alongside such work, researchers should continue to investigate the value of retrospective and prospective assessments of early caregiving experiences to identify the appropriate contexts in which to deploy such measures. It is possible that retrospective measures—although not a proxy for prospective assessments—might nonetheless be a useful tool for identifying individuals in need of intervention.

Transparency

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Author Contributions

M. D. Nivison and G. I. Roisman developed the hypotheses for the present analysis. D. L. Vandell, C. Booth-LaForce, and G. I. Roisman conducted testing and data collection. M. D. Nivison analyzed and interpreted the data under the supervision of G. I. Roisman. M. D. Nivison drafted the manuscript, and all the authors provided critical revisions. All the authors approved the final manuscript for submission.

Declaration of Conflicting Interests

The author(s) declared that there were no conflicts of interest with respect to the authorship or the publication of this article.

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Open Practices

Study of Early Child Care and Youth Development participant data from birth to 15 years old are publicly available at <https://www.icpsr.umich.edu/icpsrweb/ICPSR/studies/21940/summary>. Data past the age-15 assessment are not publicly available. The design and analysis plans for this study were not preregistered.

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Supplemental Material

Additional supporting information can be found at <http://journals.sagepub.com/doi/suppl/10.1177/0956797620975775>

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