

Early Shared Reading Is Associated with Less Harsh Parenting

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ABSTRACT: *Objective:* Shared reading is believed to enhance parent-child relationships, but the extent to which it reduces harsh parenting is understudied. Associations between early shared reading and subsequent harsh parenting were investigated. *Methods:* Data from a national urban birth cohort were used to estimate associations between mother-reported shared reading at ages 1 and 3 years and harsh parenting—based on a composite of psychological and physical aggression subscales of a validated self-report instrument—when the children were at ages 3 and 5 years. The authors used multivariable linear regression and generalized estimating equations to account for repeated observations. Given potential inverse associations between shared reading and child disruptive behaviors, which can trigger harsh parenting, the authors investigated the extent to which children’s behavior at age 3 years mediated the association between shared reading at age 1 year and harsh parenting at age 5 years. *Results:* This study included 2165 mother-child dyads. Thirty-four percent and 52% of mothers reported daily reading at ages 1 and 3 years. In adjusted models, shared reading at age 1 year was associated with less harsh parenting at age 3 years. Similarly, shared reading at age 3 years was associated with less harsh parenting at age 5 years. These associations remained significant in lagged repeated-measures models. Decreased disruptive behaviors partially mediated the association between shared reading at age 1 year and harsh parenting at age 5 years. *Conclusion:* Shared reading predicted less harsh parenting in a national urban sample. These findings suggest that shared reading contributes to an important aspect of the parent-child relationship and that some of the association operates through enhanced child behaviors.

(*J Dev Behav Pediatr* 00:1–8, 2019) **Index terms:** shared reading, parenting, child behavior, Fragile Families and Child Wellbeing Study.

Poor school readiness is a major public health issue that is strongly associated with adverse educational and health trajectories.^{1,2} Language, literacy, and social-emotional skills all contribute to school readiness, and these factors are influenced by the early home environment.³ Shared reading between parents and young chil-

dren has been shown to improve language, literacy, and social-emotional outcomes,^{4,5} and the American Academy of Pediatrics recommends that pediatricians encourage parents to read aloud with their children to enhance cognitive development and strengthen parent-child relationships.⁶

Key aspects of shared reading, such as close physical proximity and opportunities for responsivity, could potentially enhance parent-child relationships. However, while past work has established links between shared reading and aspects of the parent-child relationship, the directionality is not always clear because many of the studies are cross-sectional.⁷ Studies using longitudinal designs have found that aspects of parent-child relationships, including attachment and less parenting stress, are associated with increased frequency and quality of shared reading.^{8–10} A recent meta-analysis found that interventions promoting shared reading improved the quality of parent-child relationships¹¹; however, those studies evaluated interventions that also promoted other parent-child activities such as joint play or did not use validated outcome measures. In a low middle-income country, a randomized controlled trial demonstrated that after receiving an 8-week shared reading intervention, parents showed increased sensitivity, elaboration, and reciprocity during shared reading interactions with their infants compared with the control group.¹² The effects on sensitivity also generalized to

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play, an activity outside of a shared reading context, but to a lesser degree.¹² Given links between shared reading and increased parental sensitivity, it would be reasonable to expect that harsh parenting practices that include physical (e.g., spanking) or psychological (e.g., name calling) aggression toward a child might also be inversely associated with shared reading. In fact, previous work has found that receipt of the Video Interaction Project (VIP), an intervention designed to enhance parent-child interactions through shared reading and play, is associated with a reduction in harsh parenting practices such as the use of physical punishment.¹³ However, to our knowledge, no studies have focused exclusively on shared reading as an exposure or replicated these findings using large population-based samples.

Accordingly, to our knowledge, no studies have explored potential pathways between shared reading and harsh parenting. Previous work suggests that shared reading may have positive effects on child social-emotional outcomes. The shared reading intervention that occurred in a low middle-income country referenced above also had a positive impact on infant sustained attention and prosocial behavior relative to the control condition.^{12,14} Another study found that shared reading was associated with higher child social-emotional competence scores on a validated parent-reported measure, but this same study did not find an association between shared reading and lower behavior problem scores.⁵ The meta-analyses noted above found modest effects on child psychosocial outcomes with equivocal effects on social-emotional adjustment and behavior problems when subgroups of outcomes were examined separately.¹¹ More recently, an evaluation of the VIP program found that it reduced later hyperactivity, attention problems, and externalizing behaviors.¹⁵ However, the VIP program does not exclusively focus on shared reading. Thus, more work to understand links between shared reading and behavior problems is needed. If shared reading is in fact negatively associated with child behaviors like hyperactivity and impulsivity, which may be considered disruptive by parents, this would be important, as such behaviors are linked to harsh parenting.¹⁶ Therefore, it is possible that an association between shared reading and harsh parenting could at least partially operate through changes in disruptive behaviors.

Overall, very little is known about effects of shared reading in early childhood on harsh parenting practices, and even less is known about the potential mediating role of disruptive behaviors. In this study, we address these gaps by using data from a longitudinal population-based urban birth cohort study to investigate the relationship between early shared reading and later harsh parenting. We hypothesized that early shared reading would negatively affect harsh parenting and that the association would be partially offset by an inverse association between shared reading and child disruptive behavior. The findings from this study can contribute to knowledge about family processes and have implications for practice. From a theoretical standpoint, identifying

linkages between shared reading, child behavior, and harsh parenting can elucidate how parent and child behaviors play mutually reinforcing roles as outlined in transactional models of development.¹⁷ From an applied perspective, a better understanding of the effect of shared reading on harsh parenting and the underlying pathways through children's behavior could facilitate efforts to not only improve children's literacy, language, and social-emotional outcomes but also to prevent harsh parenting.

METHODS

Study Design and Data Source

We conducted a secondary analysis of data from the Fragile Families and Child Wellbeing Study (FFCWS). The FFCWS is a population-based urban birth cohort that includes nearly 5000 children born between 1998 and 2000 in 20 large US cities.^{18,19} The FFCWS study drew a stratified random sample of all 77 US cities with populations of 200,000 or more. In 18 cities, all hospitals with maternity wards were included; in the 2 largest cities, hospitals with maternity wards were randomly sampled. Within hospitals, births were randomly sampled, with oversamples of births to unmarried parents. While still in the hospital after giving birth, mothers were approached by a professional survey interviewer and screened for eligibility. If eligible, they were asked to participate in a national survey about the conditions and capabilities of new parents, their relationships, and their children's well-being. A mother was eligible for the study if both she and the infant's father were at least 18 years old or, if they were minors, the hospital allowed recruitment of minors into the study; if she was able to complete the interview in either English or Spanish; if the father of the newborn was living; and if the parents were not planning to place the child for adoption. The fathers were also asked to participate in an interview. Informed consent was obtained.

A total of 4898 mothers (3712 unmarried; 1186 married) were interviewed after they gave birth. Parents were reinterviewed at 1, 3, 5, 9, and 15 years after the birth. At the 3-, 5-, and 9-year follow-ups, trained interviewers administered in-home assessments of child development. The baseline response rate was 86% among eligible mothers; the response rates of mothers at the 1-, 3-, and 5-year follow-up interviews, which were used for this study, were, respectively, 89%, 86%, and 85% of the mothers interviewed at baseline.

Study Sample

The sample was limited to mothers who were primary caregivers of the focal children and had complete data on the outcome variable, harsh parenting, for which we use measures from both the 3- and 5-year follow-up interviews. Data on harsh parenting were available at both of these time points for 2310 (47%) of the 4898 mothers in the original FFCWS study. Of those 2310

mothers, we excluded 145 cases because the mother was not the primary caregiver of the focal child at both of those time points, leaving an analysis sample of 2165 mother-child dyads.

Outcome

Harsh parenting, the primary outcome variable, was assessed using the Conflict Tactic Scale (CTS): Parent Child Version.²⁰ Consistent with previous research using FFCWS data,²¹ we created a composite variable for maternal harsh parenting that included the physical and psychological aggression subscales of the CTS. At 3 and 5 years, mothers were asked to complete the subscales in reference to their own behavior. The FFCWS included 5 items about physical aggression (e.g., spank, hit, slapped, shook, and pinched) and 5 items regarding psychological aggression toward the child (e.g., shouted, threatened to spank or hit, swore, called child dumb or similar, and threaten to send away). The mother was asked how many times each behavior occurred in the past year. The FFCWS omitted 8 items from the CTS that ask about severe physical maltreatment. Similar to past work,^{22,23} responses to individual questions were assigned a score ("0" for never or not in the past year, "1" for event occurred once, "2" for twice, "4" for 3–5 times, "8" for 6–10 times, "15" for 11–20 times, or "25" for >20 times). We summed the scores for these 10 items to create overall harsh parenting scores at ages 3 and 5 years ($\alpha = 0.77$ and $\alpha = 0.80$, respectively). We also considered the psychological and physical aggression subscales separately. Harsh parenting scores at the 2 time points were moderately correlated ($r = 0.55$, $p < 0.001$). The mean CTS harsh parenting score in our analytical sample at age 3 years was 41.4 (SD = 34.9), and the mean score at age 5 years was 39.8 (SD = 33.7). For the psychological aggression subscale, the mean score was 25.2 (SD = 20.0) at age 3 years and 26.8 (SD = 21.3) at age 5 years. For the physical aggression subscale, the mean score was 16.3 (SD = 18.6) at age 3 years and 13.0 (SD = 16.5) at age 5 years.

Study Variable

The primary study variable was the mother's report of shared reading with the child. Mothers were asked the following question at both 1 and 3 years: "How many days a week do you read stories to [child]?" Similar questions are routinely used to assess shared reading frequency and are included in validated questionnaires.²⁴ Based on past work linking frequent and daily shared reading to improved developmental outcomes,⁴ we created a 3-level ordinal variable: "infrequently" (0–3 days per week), "frequently" (4–6 days per week), or "daily" (7 days per week). We assessed the sensitivity of our findings to treating shared reading as a dichotomous variable (reading infrequently versus reading frequently or daily) and as a continuous variable. Data were missing for 3.4% of our analytic sample at age 1 year and 0.1% at age 3 years.

Mediator

We included maternal ratings of disruptive behaviors at age 3 years as a potential mediator. These ratings were derived from a subset of 6 items of the Child Behavior Checklist Attention Deficit Hyperactivity Disorder problems scale (child cannot concentrate, cannot sit still, quickly shifts activities, cannot wait for turn, is demanding, gets into everything).²⁵ Responses to individual questions were assigned a score ("0" = not true, "1" = somewhat or sometimes true, "2" = very true or often true), and we summed the scores for these 6 items. Data were missing for 7.2% of the sample.

Covariates

We controlled for important potentially confounding maternal and child factors. The former included self-reported race, ethnicity, education, and relationship status at the time of the child's birth, as well as maternal depressive symptoms and material hardship at 1 year. Maternal depressive symptoms were assessed with the Composite International Diagnostic Interview-Short Form (CIDI-SF). The CIDI-SF has been used in past studies and categorizes respondents as having experienced a depressive episode in the past 12 months based on Diagnostic and Statistical Manual of Mental Disorders criteria.¹⁹ Previous work has demonstrated that maternal depression is a risk factor for infrequent shared reading and harsh parenting.^{26,27} Material hardship was assessed with 9 questions that addressed financial problems, including food, housing, and access to health care (e.g., "In the past year, were you evicted from your home?"), that were derived from the Survey of Income and Program Participation.¹⁹ An affirmative response to any of the questions was treated as presence of material hardship. We controlled for material hardship since it is associated with less positive parenting.²⁸ We also controlled for child sex. In supplementary models, we controlled for a measure of child temperament. Missing data for covariates ranged from 0% to 3%.

Statistical Analysis

We first summarized sample characteristics using descriptive statistics (e.g., measures of central tendency, variability), overall and by levels of shared reading, testing for statistically significant differences (defined as $p < 0.05$) across levels of shared reading using χ^2 analysis. Then, we estimated both unadjusted and adjusted regression models of associations between shared reading at age 1 year and harsh parenting at age 3 years and between shared reading at age 3 years and harsh parenting at age 5 years, considering harsh parenting overall as well as psychological and physical aggression separately. To account for repeated measures, we also used generalized estimating equations. Since the observations between 2 time points within subject are correlated, we used an exchangeable correlation structure to account for this correlation. We also used robust standard errors, which produce valid estimates even if the correlation

structure is not correctly specified. Shared reading was treated as a lagged independent variable (ages 1 and 3 years) predicting harsh parenting at 3 and 5 years, respectively. Finally, we examined the extent to which disruptive behaviors at age 3 years mediated the association between shared reading at age 1 year and harsh parenting at age 5 years using the product of coefficients method and calculated the bootstrap bias-corrected confidence intervals ($n = 5000$).²⁹ We used STATA 15 (StataCorp, College Station, TX) to conduct the analyses.

The Rutgers Biomedical Health Sciences Institutional Review Board determined this study to be exempt.

RESULTS

Study Sample

Table 1 summarizes sample characteristics, overall as well as by shared reading frequency at age 1 year. Fifty-two percent of children were male. Fifty-three percent

of mothers were African-American, and nearly one quarter were Latina. Only 25% of mothers were married at the time of the child's birth because the Fragile Families and Child Wellbeing Study oversampled non-marital births by design. Nearly half of the mothers in the sample reported presence of material hardship when the child was 1 year old. Shared reading frequency at age 1 year differed by maternal race, ethnicity, education, relationship status, depressive symptoms, and material hardship. Patterns at age 3 years were similar, except that differences in shared reading frequency by presence of maternal depressive symptoms were not statistically significant (results not shown). Reading frequency differed at age 1 and 3 years (Fig. 1), with 34% of mothers reporting daily shared reading at age 1 year compared with 52% of mothers at age 3 years ($p < 0.001$). Approximately one quarter of mothers reported daily shared reading at both time points.

Table 1. Overall Demographic Characteristics and by Shared Reading Frequency at Age 1

Variable, n (%) or Mean (SD)	Overall ^a	Reading 0–3 Times/Week	Reading 4–6 Times/Week	Reading 7 Times/Week	p^b
Child sex					0.293
Female	1038 (47.9)	377 (37.5)	286 (28.4)	343 (34.1)	
Male	1127 (52.1)	440 (40.5)	282 (26.0)	364 (33.5)	
Maternal race					<0.001
White	648 (30.4)	186 (29.3)	203 (32.0)	245 (38.6)	
African-American	1125 (52.8)	441 (40.8)	265 (24.5)	374 (34.6)	
Other	357 (16.8)	170 (49.4)	93 (27.0)	81 (23.6)	
Maternal ethnicity					<0.001
Non-Latino	1646 (76.5)	575 (36.1)	429 (26.9)	590 (37.0)	
Latino	506 (23.5)	237 (48.9)	136 (28.0)	112 (23.1)	
Maternal education ^c					<0.001
<High school diploma	691 (32.0)	308 (47.0)	151 (23.0)	197 (30.0)	
High school diploma	667 (30.9)	254 (38.9)	187 (28.6)	212 (32.5)	
Some college	558 (25.8)	202 (37.6)	168 (31.2)	167 (31.1)	
≥College	246 (11.4)	52 (21.4)	61 (25.1)	130 (53.5)	
Maternal relationship status ^c					<0.001
Married	532 (24.6)	145 (28.1)	158 (30.6)	214 (41.4)	
Cohabiting	779 (36.0)	319 (42.7)	206 (27.6)	222 (29.7)	
Visiting	587 (27.1)	232 (40.9)	138 (24.3)	197 (34.7)	
Friends	126 (5.8)	56 (45.9)	27 (22.1)	39 (32.0)	
Hardly talk ^d	141 (6.5)	65 (46.8)	39 (28.1)	35 (25.2)	
Depressive symptoms ^{e,f}					0.012
Present	263 (12.6)	120 (45.8)	53 (20.2)	89 (34.0)	
Not present	1832 (87.5)	697 (38.1)	515 (28.1)	618 (33.8)	
Material hardship ^{e,g}					<0.001
Present	992 (47.4)	435 (43.9)	254 (25.7)	301 (30.4)	
Not present	1103 (52.6)	382 (34.7)	314 (28.5)	406 (36.8)	

Source: Fragile Families and Child Wellbeing Study. ^aColumn percentages. All other cells report row percentages. ^bChi-square. ^cAt birth of child. ^dIncludes mothers who responded that they “hardly talk” with the biological father, “never talk” with the biological father, or the biological father is unknown. ^eAt age 1 year. ^fMaternal depressive symptoms were assessed with the Composite International Diagnostic Interview-Short Form. ^gMaterial hardship was assessed with 9 questions that addressed financial problems, including food, housing, and access to health care (e.g., In the past year, were you evicted from your home?), which were derived from the Survey of Income and Program Participation.

Regression Analysis

In linear regression models, shared reading was consistently associated with less harsh parenting. In the unadjusted model, both frequent ($B = -7.4$) and daily ($B = -8.5$) shared reading at age 1 year were negatively associated with the Conflict Tactic Scale (CTS) score at age 3 years (Table 2) relative to the reference group (infrequent shared reading). Adjusting for potential confounders resulted in minimal changes in the regression coefficients. In the unadjusted model of shared reading at age 3 years and harsh parenting at age 5 years, frequent ($B = -5.6$) and daily ($B = -9.1$) shared reading were also negatively associated with CTS score (Table 2). Again, adjusting for potential confounders resulted in minimal changes in regression coefficients. Separate results for the psychological and physical aggression subscales are provided in Table 2. Results were insensitive to treating shared reading as a dichotomous and continuous variable as well as including child temperament in models (not shown).

Generalized Estimating Equation Analysis

Shared reading continued to predict lower harsh parenting scores after accounting for repeated measures in unadjusted and adjusted generalized estimating equation models, although estimates were somewhat smaller (frequent shared reading $B = -4.2$ and daily shared reading $B = -6.1$). These findings changed minimally after adjusting for potential confounders (Table 3). Results were insensitive to treating shared reading as a dichotomous and continuous variable as well as including child temperament in models (not shown).

Mediation Analysis

Disruptive behaviors at age 3 years partially mediated the association between shared reading at age 1 year and harsh parenting at age 5 years (Fig. 2). The primary exposure, shared reading occurring 4 or more times per

week at age 1 year, was negatively associated with harsh parenting score at age 5 years after adjusting for potential confounders ($B = -5.0$). Shared reading at age 1 year was significantly associated with the mediating variable disruptive behaviors at age 3 years, adjusting for potential confounders. Disruptive behaviors at age 3 years independently predicted harsh parenting scores at age 5 years, adjusting for potential confounders. As shown in Figure 2, including disruptive behaviors at age 3 years in the multipredictor model with shared reading at age 1 year resulted in a 34% reduction in the regression coefficient for shared reading (-5.0 to -3.3). The indirect pathway was statistically significant ($B = -1.6$, bias-corrected confidence interval: -2.5 to -0.8).

DISCUSSION

In a national, population-based urban cohort, we found that early shared reading predicted less harsh parenting later in the child's life. This association was partially mediated by a negative association between shared reading and child disruptive behaviors. Our findings suggest that by reducing negative parenting behaviors that are important for the parent-child relationship, the benefits of parent-child shared reading may extend beyond improvements in cognitive and academic performance, which are typically studied as outcomes. Our findings are also consistent with transactional models of child development wherein parents' and children's behaviors are reciprocal and mutually reinforcing.

The American Academy of Pediatrics (AAP) recommends that pediatricians encourage parents to read aloud with their children to promote school readiness and strong parent-child relationships.⁶ While strong evidence links shared reading to improved cognitive and academic outcomes,³⁰ fewer studies have examined the effects of shared reading on parent-child relationships. Using data from a population-based urban cohort, we

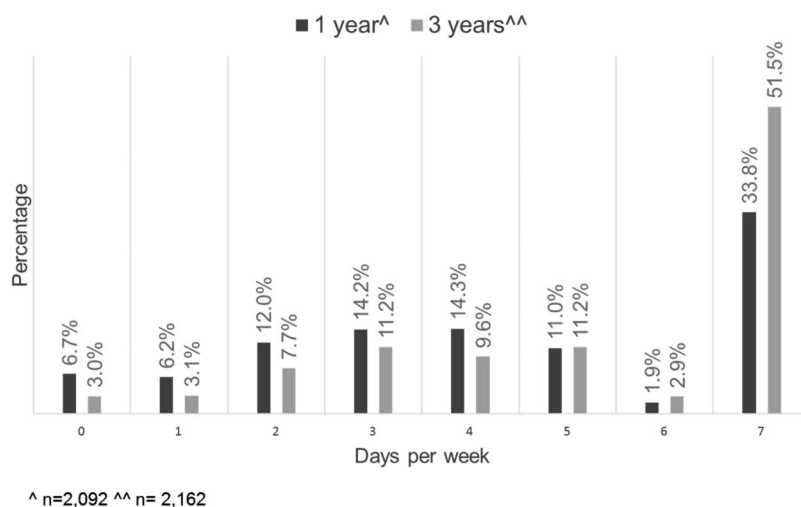


Figure 1. Frequency of mother-reported shared reading at age 1 and 3 years.

Table 2. Unadjusted and Adjusted Linear Regression Models Examining the Association Between Shared Reading and Harsh Parenting

	Unadjusted		Adjusted ^b	
	B (95% CI)	p	B (95% CI)	p
Harsh parenting at age 3 yr ^a				
Shared reading at age 1 (≤3 d per wk)	Ref.	Ref.	Ref.	Ref.
4–6 d per wk	–7.4 (–11.2 to –3.7)	<0.001	–7.2 (–10.9 to –3.5)	<0.001
7 d per wk	–8.5 (–12.0 to –5.0)	<0.001	–8.7 (–12.2 to –5.2)	<0.001
Psychological aggression at age 3 yr ^a				
Shared reading at age 1 (≤3 d per wk)	Ref.	Ref.	Ref.	Ref.
4–6 d per wk	–4.2 (–6.3 to –2.1)	<0.001	–4.1 (–6.2 to –2.0)	<0.001
7 d per wk	–5.4 (–7.4 to –3.4)	<0.001	–5.4 (–7.5 to –3.4)	<0.001
Physical aggression at age 3 yr ^a				
Shared reading at age 1 (≤3 d per wk)	Ref.	Ref.	Ref.	Ref.
4–6 d per wk	–3.3 (–5.2 to –1.3)	0.001	–3.1 (–5.1 to –1.1)	0.002
7 d per wk	–3.2 (–5.0 to –1.3)	0.001	–3.3 (–5.1 to –1.4)	0.001
Harsh parenting at age 5 yr ^a				
Shared reading at age 3 (≤3 d per wk)	Ref.	Ref.	Ref.	Ref.
4–6 d per wk	–5.6 (–9.7 to –1.6)	0.007	–6.0 (–10.1 to –1.8)	0.005
7 d per wk	–9.1 (–12.5 to –5.6)	<0.001	–8.7 (–12.2 to –5.1)	<0.001
Psychological aggression at age 5 yr ^a				
Shared reading at age 3 (≤3 d per wk)	Ref.	Ref.	Ref.	Ref.
4–6 d per wk	–4.6 (–7.2 to –2.0)	<0.001	–4.8 (–7.5 to –2.2)	<0.001
7 d per wk	–6.3 (–8.5 to –4.1)	<0.001	–6.2 (–8.5 to –3.9)	<0.001
Physical aggression at age 5 yr ^a				
Shared reading at age 3 (≤3 d per wk)	Ref.	Ref.	Ref.	Ref.
4–6 d per wk	–1.0 (–3.0–1.0)	0.32	–1.2 (–3.2–0.9)	0.27
7 d per wk	–2.8 (–4.5 to –1.1)	0.001	–2.5 (–4.2 to –0.7)	0.006

Source: Fragile Families and Child Wellbeing Study. ^aMeasured with the Conflict Tactic Scale. ^bAdjusted for child sex, race, ethnicity, maternal education, and parent relationship status at baseline as well presence of material hardship and maternal depression at age 1. CI, confidence interval.

found consistent associations between shared reading and reductions in harsh parenting, an important aspect of the parent-child relationship. Strong parent-child relationships are a critical buffer for the adversity disproportionately faced by children growing up in poverty.³¹ Early adversity has strong negative effects on academic readiness and health outcomes.^{32,33} Our findings suggest that by engaging in an activity that is cognitively enriching, parents may also improve an

important aspect of their children's environment—the parent-child relationship. The extent to which parent-child activities such as shared reading can buffer the effects of adversity warrants additional study.

We also found that an inverse association between shared reading and disruptive behaviors at age 3 years appeared to partially offset the association between shared reading at age 1 year and less harsh parenting at age 5 years. Our findings add to the growing literature

Table 3. Generalized Estimating Equation Examining Association Between Shared Reading and Harsh Parenting

	Harsh Parenting ^a			
	Unadjusted		Adjusted ^b	
	B (95% CI)	p	B (95% CI)	p
Shared reading				
≤3 d per wk	Ref.	Ref.	Ref.	Ref.
4–6 d per wk	–4.2 (–6.7 to –1.7)	0.001	–4.4 (–7.0 to –1.9)	0.001
7 d per wk	–6.1 (–8.4 to –3.8)	<0.001	–5.9 (–8.2 to –3.6)	<0.001

Source: Fragile Families and Child Wellbeing Study. ^aMeasured with the Conflict Tactic Scale. ^bAdjusted for child sex, race, ethnicity, maternal education, and parent relationship status at baseline as well presence of material hardship and maternal depression at age 1. CI, confidence interval.

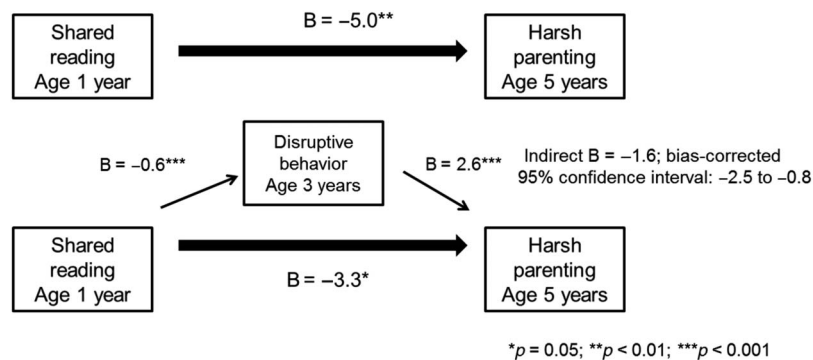


Figure 2. Mediation analysis.

linking shared reading to social-emotional outcomes among children.^{5,11,15} To date, few studies have explored how shared reading affects subsequent parenting through reductions in behavior problems. Our findings advance past work by suggesting that lower levels of parent-reported disruptive behaviors lie on the causal pathway between parents reading aloud with children and less harsh parenting later in the child’s life.

A key strength of this study is that we used data from a national population-based longitudinal cohort with repeated measures, which allowed us to establish the temporal ordering of events and facilitated the investigation of prediction and mediation pathways, which were not possible to explore in previous studies that used cross-sectional data. The data were quite rich, allowing us to control for potentially confounding maternal and child covariates. Unlike past work, we used a validated measure of harsh parenting. Despite these strengths, our study was subject to certain limitations. The findings may not generalize to nonurban settings. While we were able to examine potential causal pathways from shared reading to subsequent less harsh parenting controlling for a rich set of factors, we cannot assume causality based on the observational study design. We used a validated measure of harsh parenting, but the measure may still be subject to social desirability or recall bias. We also used maternal responses to a single question to assess shared reading frequency, which might result in overreporting of shared reading frequency, perhaps particularly so for parents who read to their child less than once per week. In this case, our results would be biased in the direction of the null hypothesis. However, this approach is widely used, and we still found that shared reading was negatively associated with harsh parenting in our models. Compared with a study based on a national sample collected during a similar timeframe, parents in our sample read less frequently to their children around the ages of 1 and 3 years.⁵⁴ However, our sample had higher proportions of African-American respondents and low-educated mothers, both of which were negatively associated with shared reading frequency in that study. Furthermore, since this is a secondary analysis of existing data, we

were unable to assess reading quality. A related concern is that shared reading, disruptive behavior, and harsh parenting were all measured using maternal reports, which introduces the possibility of common methods bias.³⁵ While this potential limitation is important, it is also worth noting that features of the Fragile Families and Child Wellbeing Study data such as temporal separation between when these constructs were measured and differences in the scale properties are potential strategies to help mitigate this common problem.³⁵ We also did not analyze fathers’ parenting behavior or the potential interplay between fathers’ and mothers’ parenting behaviors. Future work should examine the extent to which shared reading frequency may affect fathers’ and mothers’ parenting similarly and what role children’s disruptive behaviors play. Finally, while we accounted for a rich set of covariates, it is still possible that unmeasured factors account for the observed associations. For example, a mother who is inclined to read with a child because she thinks it is good for the child might also be inclined to use more positive discipline practices, which could result in less aggressive child behaviors and less harsh discipline. In this case, the observed associations would reflect the mother’s propensity to take into account the child’s needs and experiences.

Despite these limitations, we found that shared reading in early childhood appears to confer benefits above and beyond child cognitive and social-emotional outcomes. While harsh disciplinary practices can be difficult to prevent, we found that shared reading, a simple parent-child routine, was consistently associated with reductions in later harsh parenting, in part through a reduction in child disruptive behaviors. Our finding that shared reading was associated with less harsh parenting at a critical stage of child development provides additional support for the AAP recommendation to promote early shared reading. Our findings also suggest that by promoting shared reading, primary care-based literacy promotion interventions such as Reach Out and Read may also help promote resilience by enhancing the parent-child relationship through less harsh parenting. Future evaluations of such programs should consider such pathways.

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