

# Direct and Indirect Pathways From Maternal and Paternal Empathy to Young Children's Socioemotional Functioning

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In the present article, we investigated the contributions of maternal and paternal empathy to child socioemotional competence both directly and indirectly through parents' emotion socialization practices using data from two longitudinal studies: Study 1 ( $n = 122$ , 61 girls,  $M$  age = 33 months) and Study 2 ( $n = 60$ , 31 girls;  $M$  age = 27 months). Results indicated that parental empathy had an indirect effect on children's positive peer relations (Study 1 and Study 2) via more supportive reactions to children's negative emotions. No indirect effects of parental empathy emerged in the models examining parents' nonsupportive reactions to children's emotions, although parental empathy showed a direct association with greater child empathy (Study 2). Moreover, paths composing indirect and direct effects did not significantly differ as a function of parent gender. The findings suggest that mothers' and fathers' dispositional empathy contribute in similar ways to young children's socioemotional competence.

**Keywords:** parental empathy, fathers, emotion socialization, peer relationships

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Parental emotion socialization has important implications for children's socioemotional functioning, particularly during early childhood when children have fewer internal resources to manage emotions (Eisenberg, Cumberland, & Spinrad, 1998). Supportive responses to negative emotions, which focus on children's instrumental and emotional needs, may scaffold children's abilities to understand emotions and cope with challenging situations. In contrast, nonsupportive responses, including punitive and mini-

mizing reactions, may impede children's ability to effectively regulate their emotions. Research to date has largely highlighted associations between nonsupportive emotion socialization and children's negative outcomes, such as aggression, internalizing problems, and problematic peer relations (e.g., Engle & McElwain, 2011; McDowell, Kim, O'Neil, & Parke, 2002), yet parental emotion socialization may be equally important for positive functioning (e.g., Eisenberg, Spinrad, Taylor, & Liew, 2019; McElwain, Halberstadt, & Volling, 2007).

Because parental emotion socialization plays an important role in children's socioemotional development, it is important to consider parental characteristics, particularly dispositional traits (see Belsky & Barends, 2002), that predict parents' supportive and nonsupportive practices. One such trait is dispositional empathy, which encompasses a general tendency to react to others' distress in ways that take into account the other person's perspective and show emotional concern for the other (Davis, 1983). In light of this conceptual link, we examined the extent to which parents' dispositional empathy predicted parents' emotion socialization practices and, in turn, young children's peer competence and empathy.

## Parental Empathy and Emotion Socialization

Empathy is characterized by an affective response to, and understanding of, another's emotional and psychological state, which may motivate an individual to act toward others in a prosocial manner (Davis, 1983). Dix (1992) theorized that empathy is central to sensitive, responsive parenting because empathic reactions facilitate the adoption of child-centered parenting practices and attunement to the child's emotional states, interests, and needs. In

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accordance with these propositions, maternal empathic emotions predicted sensitive responding during mother–infant interaction (Leerkes et al., 2015), and mothers' child-centered perspective-taking abilities predicted more sensitive interactions with their toddler-aged children (Koren-Karie, Oppenheim, Dolev, Sher, & Etzion-Carasso, 2002). Parental empathy may also play an important role in emotion socialization specifically. Because empathic parents are more likely to be attuned to and accepting of children's emotions, such parents may engage in more supportive coping strategies (e.g., emotion- and problem-focused coping) when faced with their child's negative emotional displays and engage in fewer nonsupportive practices (e.g., minimizing and punitive reactions) that fail to take into account the child's emotional needs. It is important to note that although conceptually related, parental empathy and emotion socialization are distinct constructs. Dispositional empathy indicates a global psychological trait internal to the parent, whereas emotion socialization indicates an overt behavioral response to the child that is likely to be shaped by additional factors beyond parental empathy, such as the child's developmental status and the history of the parent–child relationship.

Prior literature, although limited, has also examined the links between parental empathy and positive child outcomes, both directly and indirectly through parenting practices. For instance, parents' self-reported dispositional empathy was associated with school-age children's reports of empathy in response to a distressing video (Eisenberg, Fabes, Schaller, Carlo, & Miller, 1991). Further, mothers' dispositional empathy was related to preschoolers' cognitive empathy, in part, through parenting that encouraged children to take the perspectives of others; children's increased perspective taking, in turn, was associated with more mother- and teacher-reported prosocial behaviors (Farrant, Devine, Maybery, & Fletcher, 2012). In the only study to test emotion socialization specifically as a mechanism linking parental empathy and children's prosocial outcomes, Strayer and Roberts (2004) reported that parents' self-reported empathy was positively related to supportive emotion socialization, which in turn predicted higher school-age children's empathy, whereas the direct association between parent and child empathy was nonsignificant. Taken together, these studies suggest that parental empathy is associated with positive child outcomes via parenting.

### Similar or Divergent Associations? The Role of Parent Gender

Studies of emotion socialization have predominantly focused on mothers, yet fathers also play an important role in children's socioemotional development (Cabrera, Fitzgerald, Bradley, & Roggman, 2014; Parke & Cookston, 2019). Cabrera et al. (2014) presented an expanded model on the ecology of father-child relationships, highlighting empirical evidence for both similarities and differences in maternal and paternal behavior and contributions to developmental outcomes. On the one hand, children benefit from supportive parenting, regardless of which parent exhibits support. On the other hand, fathers versus mothers may engage in more rough-and-tumble play, and these contexts may allow for greater range and unpredictability in children's emotional arousal, resulting in more opportunities for fathers to promote children's regulatory skills that contribute to social competence (Cabrera et al., 2014; Parke & Cookston, 2019).

Consistent with the similarity hypothesis, a review by Fagan, Day, Lamb, and Cabrera (2014) concluded that mothering and fathering constructs are similar, and that maternal and paternal behaviors affect children's outcomes in similar ways. For instance, maternal and paternal emotion socialization each predicted unique variance in children's emotion regulation, internalizing problems, and prosocial behavior (Cummings, Cheung, & Davies, 2013; van der Pol et al., 2016). However, studies concordant with the divergent model show that fathers' acceptance of children's negative emotions (Gottman, Katz, & Hooven, 1997), greater elaboration in fathers' emotion language (Grady & Hastings, 2018), and fathers' control of children's negative emotional expressions (McDowell & Parke, 2000) predicted children's social competence in the expected direction, whereas parallel maternal measures did not. In light of mixed evidence that has emerged among the few studies investigating both maternal and paternal emotion socialization practices, further investigation is warranted. In particular, the aforementioned studies did not explicitly test whether associations between emotion socialization and child outcomes significantly differed by parent gender. Doing so may help clarify the similar versus divergent roles of mothers' and fathers' emotion socialization.

Additionally, dispositional characteristics may play a role in both mothers' and fathers' parenting behaviors (Belsky & Barends, 2002; Cabrera et al., 2014). A meta-analytic review showed similar magnitude of associations between Big Five personality traits and maternal and paternal behaviors such as warmth, control, and autonomy support (Prinz, Stams, Deković, Reijntjes, & Belsky, 2009). Among the few studies to examine relations between parent characteristics and emotion socialization practices, Wong, McElwain, and Halberstadt (2009) reported that, for both mothers and fathers, positive self-expressiveness was related to more supportive reactions to children's negative emotions, whereas more accepting beliefs about children's emotions was related to fewer nonsupportive reactions. Likewise, for both mothers and fathers, Hughes and Gullone (2010) showed that agreeableness, openness, extraversion, conscientiousness, and greater use of cognitive reappraisal were related to more supportive reactions to children's negative emotions, whereas higher neuroticism and greater use of suppression to regulate emotions were related to more nonsupportive reactions. However, despite the clear conceptual link between empathy and emotion socialization, research on the extent to which parents' dispositional empathy predicts parenting and, in turn, children's social competence is surprisingly limited (see Strayer & Roberts, 2004, as a notable exception).

To address this gap, we assessed the contributions of maternal and paternal dispositional empathy to positive child outcomes via parental emotion socialization practices across two studies. The study designs differed by developmental period in which child outcomes were assessed, and we examined developmentally appropriate outcomes accordingly: children's friendship quality during the preschool years in Study 1 and prosocial behavior toward peers and emerging empathy during the toddler years in Study 2. We examined mothers and fathers in the same models to advance understanding of maternal and paternal empathy and emotion socialization as contributors to children's positive outcomes. Further, because multiple factors contribute to parental emotion socialization and child outcomes, including sociodemographic (parental education, family income) and child (gender, negative

emotionality) characteristics (see Eisenberg et al., 1998), we assessed key potential covariates for inclusion in our models.

### Study 1

Positive socioemotional functioning, especially peer competence in early childhood, may distinctly contribute to later social development (Rose-Krasnor & Denham, 2009). In particular, many children first form friendships during the preschool years (Hinde, Titmus, Easton, & Tamplin, 1985), and these early peer relationships provide important opportunities to develop and hone key socioemotional skills such as conflict resolution, affective perspective-taking, and coordination of joint goals (Rose-Krasnor & Denham, 2009). Parental responses to children's negative emotions may influence how children regulate negative emotions, which in turn plays a key role in promoting socioemotional skills relevant to peer interactions (McElwain et al., 2007; Rose-Krasnor & Denham, 2009). With this in mind, we investigated whether parents' emotion socialization accounted for the association between parental dispositional empathy and child–friend interaction quality. Parents reported on their (1) own dispositional empathy and emotion socialization practices during toddlerhood and (2) children's positive relationships with friends during the preschool years. Because parents' supportive and nonsupportive reactions to children's negative emotions may have distinct correlates and outcomes (Eisenberg et al., 1998; Wong et al., 2009), we examined supportive and nonsupportive reactions in separate models. We expected that greater parental empathy would predict more positive child–friend interaction quality via supportive reactions. It is also plausible that less parental empathy would predict less positive child–friend interaction quality via nonsupportive reactions. We assessed maternal and paternal predictors in the same models and tested whether associations differed by parent gender.

### Method

**Participants.** The data are drawn from a larger study of early socioemotional development, in which multiple assessments were conducted at 33, 39, 58, and 65 months (see McElwain, Ogolsky, Engle, Holland, & Mitchell, 2016; McElwain, Ravindran, Emery, & Swartz, 2019). This study was approved by the Institutional Review Board at the University of Illinois at Urbana–Champaign (Title: Children's Social Development Project; Institutional Review Board Protocols 05181, and 07432). For this article, we examined data collected at 33, 58, and 65 months. One hundred and 28 children and their parents were recruited via birth announcements and informational flyers distributed through local organizations and childcare centers. Four families were missing data on all assessments examined in this report, and two families were excluded because the parents had divorced or separated. Thus, the sample for this report consists of 122 families. At the initial time point, children (61 girls) ranged between 31 and 35 months of age ( $M = 32.6$  months,  $SD = .72$ ), mothers averaged 32.8 ( $SD = 5.62$ ) years of age and 16.4 ( $SD = 2.48$ ) years of education, and fathers averaged 34.2 ( $SD = 5.61$ ) years of age and 16.2 ( $SD = 2.69$ ) years of education. Mothers and fathers were 3% and 4% African American, 6% and 3% Asian American, 82% and 86% European American, 1% and 1% Hispanic, 2% and 3% Native American, and 7% and 3% more than one race, respec-

tively. For 76% of the sample, both parents were European American. Mean family income was \$70,000.

Families were contacted to participate in a second study phase during the preschool period. Sixty-three families participated in this second phase, which involved data collection when children were 58.3 ( $SD = 2.99$ ) and 64.8 ( $SD = 2.69$ ) months of age. Families did not participate due to relocation ( $n = 18$ ), time constraints ( $n = 20$ ), other concerns (e.g., health problems;  $n = 11$ ) or because we were unable to make contact with the family ( $n = 16$ ). We compared families who participated versus did not participate in the second study phase on parental reports of empathy and emotion socialization, as well as demographic characteristics (i.e., child gender, parental education, family income). All comparisons were nonsignificant, which increases confidence that model estimates were not biased by selective attrition.

**Measures.** When their children were 33 months, mothers and fathers independently completed questionnaire packets, which included measures of parental empathy, parental reactions to child negative emotions and child negative emotionality. When their children were 58 and 65 months, mothers and fathers independently reported on the quality of their child's interactions with a close friend.

**Parental empathy.** When their children were 33 months, parental empathy was measured using two subscales of the Interpersonal Reactivity Index (IRI; Davis, 1983): (1) empathic concern (seven items; e.g., "I often have tender, concerned feelings of sympathy for people less fortunate than me,"  $\alpha = .74$  and  $.79$ , mothers and fathers respectively) and (2) perspective taking (seven items; e.g., "I sometimes try to understand my friends better by imagining how things look from their perspectives,"  $\alpha = .81$  and  $.83$ ). Parents rated each item on a five-point scale, ranging from 0 (*does not describe me well*) to 4 (*describes me very well*), and ratings were averaged within the subscale. Subscales scores were correlated for mothers ( $r = .49$ ,  $p < .001$ ) and fathers ( $r = .60$ ,  $p < .001$ ) and were averaged to create a composite of maternal and paternal empathy, respectively. The IRI subscales have shown adequate test–retest reliability and convergent and discriminant validity (Davis, 1983).

**Parental reactions to toddlers' negative emotions.** When their children were 33 months, mothers and fathers also independently completed the Coping with Toddlers' Negative Emotions Scale (CTNES; Spinrad et al., 2007). Parents rated how they would respond to their children's negative emotions in 12 hypothetical situations (e.g., "If my child is afraid of going to the doctor or of getting shots and becomes quite shaky and teary, I would . . ."). For each situation, seven possible parental responses were presented, and parents rated the likelihood of engaging in each response on a seven-point scale, ranging from 1 (*very unlikely*) to 7 (*very likely*). Subscale scores for each type of parental response were computed separately for mothers and fathers by averaging each parent's ratings (with reverse scoring when appropriate) across the 12 vignettes. Given our focus on supportive and nonsupportive emotion socialization practices, the following four subscales were examined: (1) Problem-focused Reactions (e.g., "help him/her think of ways to make it less scary, like squeezing my hand when he/she gets a shot,"  $\alpha = .82$  and  $.86$  for mothers and fathers respectively), (2) Emotion-focused Reactions (e.g., "comfort my child before and/or after the shot,"  $\alpha = .75$  and  $.81$ ), (3) Punitive Reactions (e.g., "tell him/her to shape up or he/she won't

be allowed to do something he/she liked to do, e.g., go to the playground,"  $\alpha = .78$  and  $.81$ ), and (4) Minimizing Reactions (e.g., "tell my child it is really no big deal,"  $\alpha = .86$  and  $.86$ ).

The problem-focused and emotion-focused subscales were correlated for mothers ( $r = .48, p < .001$ ) and fathers ( $r = .62, p < .001$ ) and were averaged within parent to form composites of mother and father supportive reactions, respectively. The punitive and minimizing subscales were correlated for mothers ( $r = .47, p < .001$ ) and fathers ( $r = .55, p < .001$ ) and were averaged within parent to form composites of mother and father nonsupportive reactions, respectively. The CTNES was adapted from the Coping with Children's Negative Emotions Scale (CCNES; Fabes, Poulin, Eisenberg, & Madden-Derdich, 2002) for use with toddlers specifically, and the preceding composites were in accordance with a principal components factor analysis of the CCNES that yielded a four-factor solution with nonsupportive reactions (first factor) and supportive reactions (second factor) accounting for 37% and 26% of the variance, respectively (Fabes et al., 2002). The CTNES has shown good internal consistency and test-retest reliability (Spinrad et al., 2007).

**Child-friend positive interaction.** When their children were 58 and 65 months, mothers and fathers independently completed the 19-item Quality of Child's Friendship questionnaire (adapted from the Quality of Classroom Friends Questionnaire; see Clark & Ladd, 2000), which assesses the child's positive (e.g., play happily together) and negative (e.g., fight verbally) interaction quality with a close friend. Items were identical across time points and were rated on a four-point scale, ranging from 1 (*strongly disagree*) to 4 (*strongly agree*). For the purposes of this report, we examined the 11-item Positive Interaction subscale. Subscale scores were created separately for mothers and fathers at each time point by averaging ratings of the 11 items. Both mothers' ( $\alpha = .83$  and  $.79$ , 58 and 65 months, respectively) and fathers' ( $\alpha = .80$  and  $.76$ ) ratings showed good internal consistency. Ratings were positively correlated across parents ( $r = .43, p = .002$ ;  $r = .66, p < .001$ , 58 and 65 months, respectively) and time points ( $r = .44, p = .004$ ;  $r = .46, p = .001$ , paternal and maternal reports, respectively). To obtain a more reliable, robust measure of friendship quality during the preschool period, we computed one composite of child-friend positive interaction by averaging mothers' and fathers' ratings when their children were 58 and 65 months ( $\alpha = .79$ ).

**Child negative emotionality.** Mothers and fathers independently completed portions of the Toddler Behavior Assessment Questionnaire (TBAQ; Goldsmith, 1996). Parents rated how often, in the last month, their child exhibited specific behaviors, including (1) social fearfulness (19 items,  $\alpha = .87$  and  $.91$ , mothers and fathers respectively), and (2) anger proneness (19 items,  $\alpha = .89$  and  $.90$ ). Items were rated on a seven-point scale ranging from 1 (*never*) to 7 (*always*), and subscales were computed by averaging ratings (with reverse scoring when appropriate) across items. Mother and father reports were correlated for social fearfulness ( $r = .59, p < .001$ ) and anger proneness ( $r = .53, p < .001$ ), and we computed a composite score of child negative emotionality by averaging across subscales and mother and father reports ( $\alpha = .68$ ). The TBAQ has well-established reliability and validity and shows convergence with parent and teacher reports of other conceptually related child behaviors (see Goldsmith, 1996).

**Data analytic plan.** We used Mplus 8.3 (Muthén & Muthén, 1998–2018) to simultaneously test (1) direct paths from parental

empathy to child-friend positive interaction and (2) indirect paths from parental empathy to child-friend positive interaction via parental supportive (or nonsupportive) reactions to children's negative emotions. Maternal and paternal predictors were tested in the same model, and covariances among maternal and paternal empathy and child negative emotionality were estimated, as was the covariance between the error terms for maternal and paternal reactions. To test whether paths differed by parent gender, we constrained paths to be equal across parents and conducted chi-square difference tests between the constrained and unconstrained models. Indirect effects were tested via a bootstrapping technique (5,000 replications), and bias-corrected confidence intervals were examined to assess significance of the indirect effects. The comparative fit index (CFI) and root-mean-square error of approximation (RMSEA) were examined to assess model fit. CFI values above 0.95 (Hu & Bentler, 1995) and RMSEA values less than 0.08 (Browne & Cudeck, 1993) indicate good fit.

In addition to missing data due to attrition, maternal or paternal reports on the predictor variables were missing in a few cases (see Table 1). We used full-information maximum likelihood estimation (FIML), which uses all data available and provides less biased estimates than other methods (e.g., listwise deletion; see Schafer & Graham, 2002). Thus, the models reported below were based on the full sample ( $N = 122$ ).

## Results

**Preliminary analyses.** Descriptive statistics and correlations among the study measures are reported in Table 1. Family income, maternal and paternal years of education, child age, gender, and negative emotionality were examined as potential covariates via bivariate correlations or  $t$  tests with the child outcome measure. Child negative emotionality was negatively correlated with child-friend positive interactions ( $r = -.36, p = .004$ ). No other significant associations emerged. To examine whether parent-reported empathy, supportive reactions, or nonsupportive reactions differed by parent or child gender, 2 (parent)  $\times$  2 (child gender) repeated-measures analyses of variance (ANOVAs) were conducted, with parent as the repeated factor. Significant main effects of parent gender indicated that mothers versus fathers reported higher levels of dispositional empathy,  $F(1, 113) = 29.49, p < .001$ , more support,  $F(1, 111) = 56.98, p < .001$ , and less nonsupport,  $F(1, 111) = 29.40, p < .001$  (see Table 1 for means). Although no main effects of child gender emerged, the interaction between parent and child gender was significant for nonsupportive reactions,  $F(1, 111) = 8.25, p = .005$ , such that fathers reported more nonsupport for girls versus boys, whereas mothers showed no difference by child gender (see Table 1). We included child gender and negative emotionality as covariates in the path models given these significant associations.

**Path models.** We tested mothers' and fathers' reactions to children's negative emotions as a mechanism linking parental empathy and positive child-friend interaction. Supportive and nonsupportive reactions were examined in separate models. Child gender and negative emotionality were entered as covariates (i.e., predicting each of the endogenous variables in a given model). We first compared each unconstrained model (i.e., all parameters freely estimated) with the constrained model. The following paths were constrained to be equal across mothers and fathers: (1)



Table 1  
Intercorrelations and Descriptive Statistics for the Study 1 Measures

| Study measure                        | 1    | 2    | 3    | 4     | 5      | 6     | 7                | 8                |
|--------------------------------------|------|------|------|-------|--------|-------|------------------|------------------|
| 1. Child negative emotionality       | —    | .01  | -.08 | .09   | -.05   | .11   | .18 <sup>†</sup> | -.36**           |
| 2. Maternal empathy                  |      | —    | -.00 | .31** | .06    | -.21* | -.13             | .13              |
| 3. Paternal empathy                  |      |      | —    | .06   | .32*** | -.18  | -.21*            | -.15             |
| 4. Maternal supportive reactions     |      |      |      | —     | .11    | -.07  | -.01             | .29*             |
| 5. Paternal supportive reactions     |      |      |      |       | —      | -.13  | -.15             | .25 <sup>†</sup> |
| 6. Maternal nonsupportive reactions  |      |      |      |       |        | —     | .37***           | -.04             |
| 7. Paternal nonsupportive reactions  |      |      |      |       |        |       | —                | .12              |
| 8. Child–friend positive interaction |      |      |      |       |        |       |                  | —                |
| Full sample                          |      |      |      |       |        |       |                  |                  |
| <i>N</i>                             | 122  | 121  | 116  | 119   | 116    | 119   | 116              | 63               |
| <i>M</i>                             | 3.61 | 2.90 | 2.50 | 6.04  | 5.45   | 2.51  | 2.94             | 3.20             |
| <i>SD</i>                            | .68  | .50  | .61  | .54   | .71    | .82   | .88              | .28              |
| Girls                                |      |      |      |       |        |       |                  |                  |
| <i>n</i>                             | 61   | 61   | 58   | 59    | 58     | 59    | 58               | 31               |
| <i>M</i>                             | 3.62 | 2.92 | 2.42 | 5.97  | 5.45   | 2.45  | 3.13             | 3.22             |
| <i>SD</i>                            | .71  | .48  | .60  | .61   | .78    | .82   | .95              | .26              |
| Boys                                 |      |      |      |       |        |       |                  |                  |
| <i>n</i>                             | 61   | 60   | 58   | 60    | 58     | 60    | 58               | 32               |
| <i>M</i>                             | 3.60 | 2.88 | 2.58 | 6.11  | 5.45   | 2.58  | 2.75             | 3.19             |
| <i>SD</i>                            | .65  | .51  | .60  | .44   | .63    | .82   | .77              | .30              |

<sup>†</sup>  $p < .10$ . \*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

parental empathy, child gender, and negative emotionality to parental support (or nonsupport); (2) parental empathy to child–friend interaction; and (3) parental support (or nonsupport) to child–friend interaction. The chi-square difference test was nonsignificant for the support model,  $\chi^2(5) = 7.605$ ,  $p = .18$ , but significant for the nonsupport model,  $\chi^2(5) = 11.972$ ,  $p = .035$ . Follow-up tests of pairs of paths in the nonsupport model indicated the path from child gender to nonsupport was significant,  $\chi^2(1) = 7.74$ ,  $p = .005$ . Thus, except for this gender–nonsupport path, which was free to vary, we report the estimates for the constrained paths.

**Supportive reactions.** Model fit was good:  $\chi^2(10) = 10.562$ ,  $p = .63$ , RMSEA = .002, CFI = 0.99. As shown in Figure 1, greater empathy predicted parents' more supportive reactions ( $b = .34$ ,  $SE = .07$ ,  $p < .001$ ). Further, more supportive reactions predicted more child–friend positive interaction ( $b = .11$ ,  $SE = .04$ ,  $p = .006$ ), and the indirect effect of parental empathy on child–friend interaction via parental support was significant (estimate: .037; 95% CI<sub>bc</sub> [.021, .088]). The direct effect of parental empathy on child–friend positive interaction was nonsignificant ( $b = -.04$ ,  $SE = .05$ ,  $p = .43$ ).

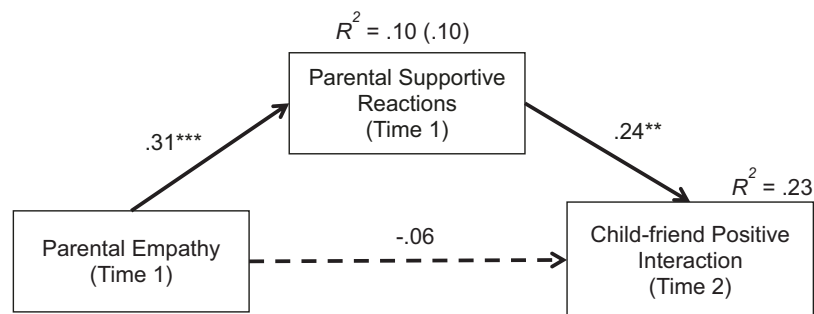


Figure 1. Study 1 path model with Time 1 parental supportive reactions as an intervening mechanism between Time 1 parental empathy and Time 2 child–friend positive interaction. Paths were constrained to be equal across mothers and fathers. Standardized path estimates and  $R^2$  values are shown ( $R^2$  value for father was reported in parenthesis). To obtain the standardized coefficients shown in this figure, the raw variables were first standardized. Child negative emotionality and gender were included as covariates, and greater child negative emotionality predicted less child–friend positive interaction ( $\beta = -.34$ ,  $b = -.14$ ,  $SE = .05$ ,  $p = .007$ ). Covariance parameters between (Panel a) maternal and paternal empathy and (Panel b) maternal and paternal supportive reactions were estimated but were nonsignificant. They are not shown in the figure for ease of presentation. \*\*  $p < .01$ . \*\*\*  $p < .001$ .

**Nonsupportive reactions.** Model fit was adequate:  $\chi^2(9) = 13.618$ ,  $p = .33$ , RMSEA = .065, CFI = .89. Path estimates showed that greater parental empathy was related to fewer nonsupportive reactions ( $b = -.22$ ,  $SE = .10$ ,  $p = .039$ ), yet the path from parental nonsupport to child–friend positive interaction was nonsignificant ( $b = .02$ ,  $SE = .03$ ,  $p = .52$ ), as was the direct path from parental empathy to child–friend positive interaction ( $b = .03$ ,  $SE = .05$ ,  $p = .54$ ; see Figure 1s in the online supplemental material for details).

## Discussion

We found support for our hypothesis that parental supportive emotion socialization would serve as a mechanism through which higher levels of parental empathy predict more positive child–friend interaction. Namely, parental dispositional empathy was related to more supportive reactions to children’s negative emotions during the toddler period; parental supportive reactions, in turn, predicted more positive child–friend interaction during the preschool period. Such indirect effects, however, did not emerge for nonsupportive reactions, nor did direct effects of parental empathy on child–friend positive interaction emerge. Last, consistent with the similarity hypothesis, key paths composing direct and indirect effects did not differ by parent gender, suggesting that parents contribute to children’s peer competence in similar ways (Cabrera et al., 2014; van der Pol et al., 2016).

We aimed to replicate and extend Study 1 findings in Study 2 by testing parallel models among toddlers and their parents. Given rapidly developing cognitive, language, and physical abilities, toddlerhood marks the emergence of complex interactions with peers such as sharing, turn-taking, and cooperative exchanges (Brownell, Nichols, & Svetlova, 2013) and empathic responses toward others’ distress (Nichols, Svetlova, & Brownell, 2009). Further, with toddlers’ heightened negative emotions and increased bids for autonomy, contributions of parental empathy and emotion socialization to socioemotional outcomes may be especially relevant. Research linking parental empathy (e.g., Farrant et al., 2012; Strayer & Roberts, 2004) or emotion socialization (e.g., Eisenberg et al., 1991; McElwain et al., 2007) to child outcomes, however, has been predominantly conducted with preschool- and school-aged samples. With these issues in mind and in light of Study 1 findings, we hypothesized that greater parental empathy would predict more prosocial peer relations during the toddler period via supportive reactions to toddlers’ negative emotions. Because evidence indicates toddler empathy is both dispositional and socialized via parental input (e.g., Nichols et al., 2009), our examination of direct and indirect effects of parental empathy on toddler empathy was exploratory.

## Study 2

### Method

**Participants.** The data for this report are drawn from a larger study of childcare arrangements and socioemotional development during the toddler period (see Emery, McElwain, Groh, Haydon, & Roisman, 2014; Swartz, Speirs, Encinger, & McElwain, 2016). This study was approved by the Institutional Review Board at the University of Illinois at Urbana–Champaign (Title: Toddler Tran-

sitions Project; Protocol 10126). Sixty-six children and their parents were recruited via online announcements and informational flyers distributed through local organizations and childcare centers. Families were eligible to participate if they had a toddler-aged child who was in nonparental care for at least 10 hr per week. Data from six families were not included in the analyses because the mother did not have a partner in the home or because parents had divorced or separated. Thus, the Study 2 sample consisted of 60 families. At the initial time point, children (31 girls) ranged between 18 and 37 months of age ( $M = 27.0$  months,  $SD = 5.22$ ). Mothers averaged 32.4 years of age ( $SD = 3.71$ ), 3% had a 2-year or technical degree, 12% had completed some college, 37% had a bachelor’s degree, and 48% had an advanced degree. Fathers averaged 35.2 years of age ( $SD = 5.53$ ), 7% had a high school diploma, 7% had a 2-year or technical degree, 9% had completed some college, 39% had a bachelor’s degree, and 39% had an advanced degree. Mothers and fathers were 5% and 9% Black, 10% and 5% Asian, 83% and 84% White, and 2% and 2% identified as other or more than one race, respectively. For 77% of the sample, both parents were White. Mean annual family income ranged between \$71,000 and \$80,000.

**Measures.** For this article, we examined mothers’ and fathers’ reports of parental empathy, reactions to children’s negative emotions and child negative emotionality at Time 1 and reports of children’s prosocial peer competence and empathy at Time 2, which occurred approximately 8 months later ( $M = 8.2$  months,  $SD = 1.37$ ).

**Parental empathy.** At Time 1, parental empathy was measured using the same two subscales of the Interpersonal Reactivity Index (Davis, 1983) as described in Study 1. Empathic Concern (seven items,  $\alpha = .85$  and  $.79$ , mothers and fathers respectively) and Perspective Taking (seven items,  $\alpha = .85$  and  $.77$ ) showed good internal reliability. The two subscales were correlated for mothers ( $r = .53$ ,  $p < .001$ ) and fathers ( $r = .43$ ,  $p = .001$ ) and were averaged within parent to create composites of maternal and paternal empathy, respectively.

**Parental reactions to toddlers’ negative emotions.** At Time 1, mothers’ and fathers’ reactions to toddlers’ negative emotions were assessed using the CTNES (Spinrad et al., 2007; see Study 1, Measures section), and we examined four subscales (1) Problem-Focused Reactions ( $\alpha = .73$  and  $.74$  for mothers and fathers, respectively), (2) Emotion-Focused Reactions ( $\alpha = .78$  and  $.72$ ), (3) Punitive Reactions ( $\alpha = .73$  and  $.83$ ), and (4) Minimizing Reactions ( $\alpha = .85$  and  $.84$ ). The Problem-focused Reactions and Emotion-focused Reactions subscales were positively correlated for mothers ( $r = .30$ ,  $p = .02$ ) and fathers ( $r = .37$ ,  $p = .005$ ) and were averaged within parent to form composites of mother and father supportive reactions. The Punitive Reactions and Minimizing Reactions subscales were also correlated ( $r_s = .43$  and  $.37$ ,  $p_s = .001$  and  $.004$  for mothers and fathers, respectively) and averaged within parent to form composites of mother and father nonsupportive reactions.

**Child prosocial peer relations and empathy.** At Time 2, mothers and fathers independently completed the 37-item Competence subscale of the Infant–Toddler Social and Emotional Assessment (ITSEA; Carter, Briggs-Gowan, Jones, & Little, 2003). Parents rated a series of statements about child behavior using a three-point scale, ranging from 0 (*not true/rarely*) to 2 (*very true/often*), and ratings were averaged across items from a given

subscale. For this report, the five-item Prosocial Peer Relations (e.g., “takes turns when plays with others,”  $\alpha = .69$  for both mothers and fathers) and the seven-item Empathy (e.g., “worried or upset when someone is hurt,”  $\alpha = .81$  and  $.79$  for mothers and fathers, respectively) subscales were examined. Mothers’ and fathers’ ratings of child prosocial peer relations ( $r = .46, p = .001$ ) and child empathy ( $r = .45, p = .002$ ) were positively correlated, and we averaged ratings across parents to obtain measures of child prosocial peer relations and child empathy, respectively. The ITSEA has shown adequate test-retest reliability and discriminant validity in a sample of 12- to 36-month-old children (Carter et al., 2003).

**Child negative emotionality.** At Time 1, child negative emotionality was measured using the same two subscales of the Toddler Behavior Assessment Questionnaire (TBAQ; Goldsmith, 1996) as described in Study 1. Social Fearfulness (19 items,  $\alpha = .90$  and  $.85$ , mothers and fathers, respectively) and Anger Prone-ness (19 items,  $\alpha = .88$  and  $.87$ ) showed good internal reliability. Mother and father reports were correlated for social fearfulness ( $r = .58, p < .001$ ) and anger proneness ( $r = .57, p < .001$ ), and we computed a composite score of child negative emotionality by averaging across subscales and mother and father reports ( $\alpha = .62$ ).

**Data analytic plan.** The data analytic procedures paralleled those outlined in Study 1. Using Mplus 8.3, we tested parental supportive and nonsupportive reactions in separate models and child prosocial peer relations or child empathy as outcomes in separate models, for a total of four model tests. Missing data were minimal (see Table 2), and we used FIML to make use of all available data.

## Results

**Preliminary analyses.** Descriptive statistics and intercorrelations for the study measures are reported in Table 2. Although no significant associations emerged between the potential covariates (i.e., family income, parental education, child age, gender and negative emotionality) and child outcome measures, girls’ empathy was marginally higher than boys’,  $t(54) = 1.68, p = .099$ , and child negative emotionality was related to both maternal and child empathy in the expected direction (see Table 2). Given these trends, and to be consistent with Study 1 models, we controlled for child gender and negative emotionality in Study 2 path models. Paralleling Study 1 results, 2 (parent)  $\times$  2 (child gender) repeated-measures ANOVAs indicated that mothers versus fathers reported higher levels of dispositional empathy,  $F(1, 55) = 11.37, p = .001$ , more support,  $F(1, 55) = 36.55, p < .001$ , and less nonsupport,  $F(1, 55) = 36.15, p < .001$  (see Table 2 for means).

**Path models.** As in Study 1, we first compared model fit for the unconstrained versus constrained models in which paths were constrained across parent gender. Chi-square difference tests were all nonsignificant: Prosocial peer relations values were  $\chi^2(5) = 3.134, p = .68$  and  $\chi^2(5) = 2.275, p = .81$ , and empathy values were  $\chi^2(5) = 3.207, p = .67$  and  $\chi^2(5) = 7.259, p = .20$ , for support and nonsupport models, respectively. Therefore, we report the estimates for the constrained models in the following text.

**Peer relations and supportive reactions.** Model fit was good:  $\chi^2(10) = 7.359, p = .81$ , RMSEA = .000, CFI = 1.000. As is shown in Figure 2 (Panel a), higher empathy predicted parents’ more supportive reactions ( $b = .24, SE = .07, p = .001$ ). Further, more parental supportive reactions predicted more prosocial peer relations ( $b = .16, SE = .06, p = .007$ ), and the indirect effect of

Table 2  
Intercorrelations and Descriptive Statistics for the Study 2 Measures

| Study measure                       | 1    | 2    | 3    | 4                | 5    | 6                 | 7      | 8     | 9      |
|-------------------------------------|------|------|------|------------------|------|-------------------|--------|-------|--------|
| 1. Child negative emotionality      | —    | -.21 | -.14 | -.04             | .09  | .12               | .05    | -.11  | -.22   |
| 2. Maternal empathy                 |      | —    | .06  | .23 <sup>†</sup> | .09  | -.37**            | -.08   | .08   | .34*   |
| 3. Paternal empathy                 |      |      | —    | .12              | .29* | -.23 <sup>†</sup> | -.35** | .13   | .19    |
| 4. Maternal supportive reactions    |      |      |      | —                | -.04 | -.18              | -.13   | .10   | .17    |
| 5. Paternal supportive reactions    |      |      |      |                  | —    | -.05              | .11    | .38** | .31*   |
| 6. Maternal nonsupportive reactions |      |      |      |                  |      | —                 | .22    | -.04  | .01    |
| 7. Paternal nonsupportive reactions |      |      |      |                  |      |                   | —      | -.10  | -.14   |
| 8. Child prosocial peer relations   |      |      |      |                  |      |                   |        | —     | .52*** |
| 9. Child empathy                    |      |      |      |                  |      |                   |        |       | —      |
| Full sample                         |      |      |      |                  |      |                   |        |       |        |
| <i>N</i>                            | 60   | 60   | 57   | 60               | 57   | 60                | 57     | 56    | 56     |
| <i>M</i>                            | 3.99 | 2.87 | 2.55 | 6.16             | 5.59 | 2.24              | 2.99   | 1.56  | 1.52   |
| <i>SD</i>                           | .58  | .62  | .55  | .48              | .57  | .68               | .81    | .33   | .34    |
| Girls                               |      |      |      |                  |      |                   |        |       |        |
| <i>n</i>                            | 31   | 31   | 29   | 31               | 29   | 31                | 29     | 28    | 28     |
| <i>M</i>                            | 4.10 | 2.80 | 2.59 | 6.19             | 5.66 | 2.19              | 3.04   | 1.60  | 1.59   |
| <i>SD</i>                           | .59  | .65  | .48  | .43              | .47  | .75               | .81    | .32   | .32    |
| Boys                                |      |      |      |                  |      |                   |        |       |        |
| <i>n</i>                            | 29   | 29   | 28   | 29               | 28   | 29                | 28     | 28    | 28     |
| <i>M</i>                            | 3.88 | 2.95 | 2.52 | 6.14             | 5.52 | 2.29              | 2.95   | 1.51  | 1.44   |
| <i>SD</i>                           | .55  | .59  | .62  | .53              | .65  | .61               | .83    | .33   | .35    |

<sup>†</sup>  $p < .10$ . \*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

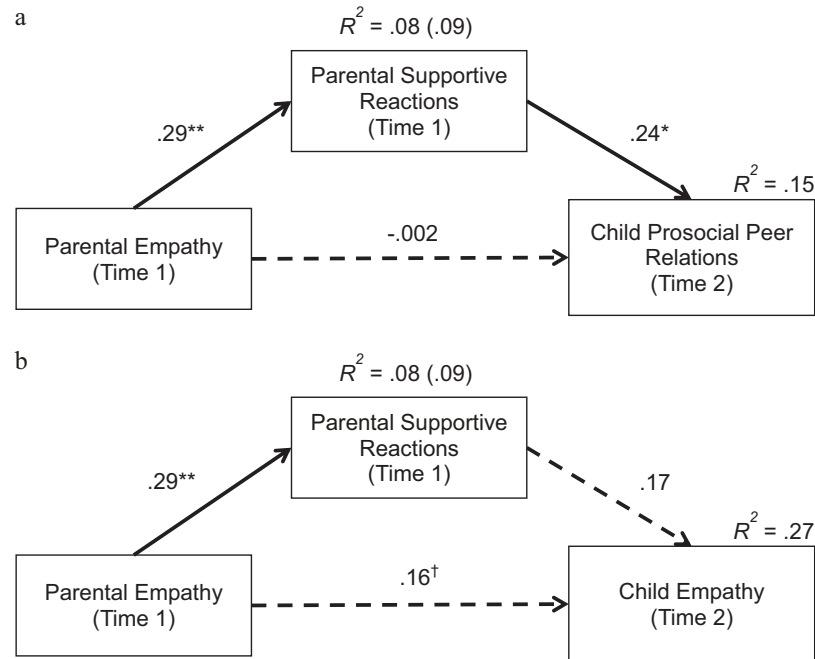


Figure 2. Study 2 path models with Time 1 parental supportive reactions as an intervening mechanism between parental empathy at Time 1 and children's (Panel a) prosocial peer relations and (Panel b) empathy at Time 2. Paths were constrained to be equal across mothers and fathers. Standardized path estimates and  $R^2$  values are shown ( $R^2$  values for fathers was reported in parentheses). To obtain the standardized coefficients shown in this figure, the raw variables were first standardized. Child negative emotionality and gender were included as covariates. All covariate paths were nonsignificant in model (Panel a), whereas girls' empathy was higher than boys' ( $\beta = .24$ ,  $b = .16$ ,  $SE = .07$ ,  $p = .026$ ) in model (Panel b). Covariance parameters between (Panel a) maternal and paternal empathy and (Panel b) maternal and paternal supportive reactions were estimated but were nonsignificant. They are not shown in the figure for ease of presentation.  $^\dagger p < .10$ .  $* p < .05$ .  $** p < .01$ .

parental empathy on prosocial peer relations via parental support was significant (estimate: .039; 95% CI<sub>bc</sub> [.007, .084]). The direct effect of parental empathy on prosocial peer relations was nonsignificant ( $b = -.004$ ,  $SE = .07$ ,  $p = .95$ ).

**Peer relations and nonsupportive reactions.** Model fit was good:  $\chi^2(10) = 8.223$ ,  $p = .70$ , RMSEA = .000, CFI = 1.000. Higher parental empathy was related to fewer nonsupportive reactions ( $b = -.42$ ,  $SE = .11$ ,  $p < .001$ ). However, the path from nonsupport to child prosocial peer relations was nonsignificant ( $b = -.01$ ,  $SE = .04$ ,  $p = .82$ ), as was the direct path from parental empathy to prosocial peer relations ( $b = .04$ ,  $SE = .07$ ,  $p = .55$ ). All standardized estimates and  $R^2$  values are reported in Figure 2s in the online supplemental material.

**Child empathy and supportive reactions.** Model fit was good:  $\chi^2(10) = 7.755$ ,  $p = .76$ , RMSEA = .000, CFI = 1.000. As is shown in Figure 2 (Panel b), higher empathy predicted more supportive reactions ( $b = .25$ ,  $SE = .07$ ,  $p = .001$ ). More parental support, however, was marginally related to higher child empathy ( $b = .11$ ,  $SE = .07$ ,  $p = .091$ ), and the indirect effect of parental empathy on child empathy was nonsignificant (estimate: .027; 95% CI<sub>bc</sub> [-.002, .071]). The direct effect of parental empathy was marginally significant ( $b = .10$ ,  $SE = .06$ ,  $p = .084$ ). Given the marginally significant results, it is worth noting that the total effect from parental empathy to child empathy was significant (estimate: .122; 95% CI<sub>bc</sub> [.018, .230]). As a follow-up analysis,

we tested models in which either the direct or the indirect paths were constrained to zero. The results showed that both the indirect effect (estimate: .038; 95% CI<sub>bc</sub> [.009, .082]) and the direct effect ( $b = .13$ ,  $SE = .05$ ,  $p = .012$ ) were significant when tested separately.

**Child empathy and nonsupportive reactions.** Model fit was adequate:  $\chi^2(10) = 13.349$ ,  $p = .32$ , RMSEA = .075, CFI = .88. Higher parental empathy was related to fewer nonsupportive reactions ( $b = -.42$ ,  $SE = .11$ ,  $p < .001$ ), but the path from nonsupportive reactions to child empathy was nonsignificant ( $b = .03$ ,  $SE = .04$ ,  $p = .43$ ). The direct path from parental empathy to child empathy, however, was significant ( $b = .15$ ,  $SE = .06$ ,  $p = .009$ ), such that higher parental empathy predicted greater child empathy (see Figure 3s in the online supplemental material).

## Discussion

Paralleling Study 1 results, parental empathy had a significant indirect effect on children's prosocial peer relations via more supportive reactions to children's negative emotions. Although an indirect effect did not emerge for child empathy, the total effect of parental empathy was significant when considering supportive reactions as a mechanism. We note that the path estimates for the indirect effect predicting child empathy were in the expected direction, and the null finding may be partly due to limited statis-



tical power associated with the modest sample size. Additionally, and consistent with Study 1 results, no indirect effects emerged in the models testing nonsupportive reactions, whereas parental empathy had a direct effect on child empathy (also see Eisenberg et al., 1991; Strayer & Roberts, 2004), suggesting that parental empathy may be related to child empathy through other types of parenting practices (e.g., talk about emotions, Drummond, Paul, Waugh, Hammond, & Brownell, 2014). Notably, associations did not differ by parent gender, indicating that mothers and fathers may similarly promote children's prosocial outcomes during toddlerhood (Cabrera et al., 2014). This is the first study, to our knowledge, showing that parental empathy may contribute to child prosocial relations and empathy as early as toddlerhood.

### General Discussion

Our central aim was to examine the extent to which maternal and paternal dispositional empathy contributed to children's positive socioemotional outcomes via parents' emotion socialization practices. Across two studies encompassing distinct samples, developmental periods (i.e., toddlerhood and preschool years) and child outcomes, parental empathy had indirect effects on children's positive peer relations via parents' more supportive reactions to children's negative emotions. Specifically, for both mothers and fathers, parents' dispositional empathy predicted more supportive emotion socialization practices (also see Fabes et al., 2002; Strayer & Roberts, 2004), supporting the theoretical proposition that parental dispositional empathy plays a critical role in organizing sensitive parenting (Dix, 1992). That is, parents who are generally empathic may engage in more positive parenting practices partly due to their abilities to consider their child's perspective and emotions and anticipate the child's behavior as a function of his or her emotions and needs. Parents' supportive reactions, in turn, contributed to child-friendly positive interactions during the preschool years (Study 1) and general peer competence during toddlerhood (Study 2). Consistent with past work, children may exhibit more positive and prosocial behaviors during peer interactions when parents scaffold understanding and coping with negative emotions (Eisenberg et al., 1998; McElwain et al., 2007). Taken together, our results indicate that supportive emotion socialization may serve as a mechanism through which parental dispositional empathy is associated with positive child outcomes.

With respect to parental nonsupportive reactions, parental empathy predicted less nonsupport in both studies, yet all paths from nonsupport to child outcomes were nonsignificant and no indirect effects emerged. Parental nonsupport may be more relevant to predicting negative child outcomes, such as aggression and internalizing problems (Engle & McElwain, 2011; McDowell et al., 2002) and may not necessarily impede prosocial development (McElwain et al., 2007). We caution, however, that low-risk community samples were examined in this article, and the associations between nonsupportive emotion socialization and diminished child prosocial outcomes may be observed among high-risk families (e.g., Garner, Jones, & Miner, 1994).

We also tested whether paths differed by parent gender, and in all cases, both indirect and direct effects did not significantly differ for mothers and fathers. These results are consistent with the similarity hypothesis (Cabrera et al., 2014) and empirical evidence indicating that both mothers and fathers contribute to child out-

comes (Cummings et al., 2013; Fagan et al., 2014; van der Pol et al., 2016). However, because dispositional empathy and reactions to children's negative emotions were each assessed using the same measures across mothers and fathers, we may have been limited in our ability to capture qualitative differences in maternal and paternal cognitions or behaviors. Additionally, the CTNES assesses parental reactions to children's negative emotions in specific hypothetical scenarios and does not capture paternal responses to children in the context of rough-and-tumble play—a context in which fathers in particular may help children learn to regulate emotions (Parke & Cookston, 2019). Future research should incorporate a broader range of parenting measures across a variety of contexts and utilize both global and dynamic assessments to further elucidate the similar and divergent ways in which mothers and fathers foster children's socioemotional functioning.

Next, we turn to the null indirect effect for child empathy in Study 2. Although parental empathy predicted more supportive reactions, parental support was marginally related to child empathy and the indirect effect for child empathy was nonsignificant. Greater parental empathy, however, showed a marginal direct association with more child empathy, and the total effect (Direct + Indirect effects) of parental empathy on child empathy was significant. Further, the direct effect of parental empathy on child empathy was significant in the model examining parents' nonsupportive reactions. Taken together, this pattern of results indicates that indirect effects (via parental support) and direct effects may make overlapping contributions to child empathy. Compared with peer relations, which involve a complex array of social skills and processes, child empathy is an individual characteristic. As such, child empathy may be more directly related to parental empathy due to hereditary factors (Polderman et al., 2015), although it could also be shaped by other facets of emotion socialization, such as talk about others' emotions (e.g., Drummond et al., 2014). Future research should consider alternative mechanisms that may underlie the linkage between parental and child empathy.

We note several limitations. First, our samples were predominantly white, well educated, and middle class, and our sample sizes were modest. Thus, the findings cannot be generalized to families with different ethnic, socioeconomic, or cultural backgrounds, and replication in other contexts with larger samples is needed. Second, parental empathy and emotion socialization were assessed concurrently in both studies. As a dispositional trait, it is plausible that parental empathy may influence emotion socialization practices consistently across time. Nevertheless, parental empathy, emotion socialization practices, and child outcomes would ideally be assessed across three time points and tests of indirect effects would control for earlier levels of the intervening mechanism and child outcome.

Finally, we measured all constructs using parent reports, and findings may be prone to same-method bias. We aimed to mitigate such bias by (1) averaging maternal and paternal reports when appropriate (i.e., child outcomes), which provides more valid and robust measurement compared with measures from a single reporter (Rushton, Brainerd, & Pressley, 1983), and (2) using empathy and socialization measures that targeted different interpersonal contexts. As to the latter point, our measure of dispositional empathy tapped parents' internal empathic orientation toward general others (vs. external responses to the child), and weak to moderate correlations between parental empathy and the emotion

socialization measures indicated that these constructs were distinct but related. Further, parental self-reports may be the method of choice to assess parental cognitions or infrequent behaviors, or when parental responses may be modified when observed (see Putnick, 2019). In this vein, parental responding to children's emotions may be difficult to assess using brief laboratory observations, and even when observations are of considerable length (e.g., 1 hr), not all toddler-aged children express negative emotion (e.g., Emery et al., 2014). Thus, self-report measures such as the CTNES (Spinrad et al., 2007) may better capture the responses to a variety of emotion-eliciting scenarios parents encounter with their child. Additionally, families with fathers who are willing (vs. not willing) to participate in time-intensive research procedures (e.g., laboratory visits) may differ in significant ways (e.g., more optimal parenting, Costigan & Cox, 2001). Thus, we aimed to balance inclusion of fathers using less intensive procedures (i.e., parent reports) with the generalizability of our findings.

Despite these limitations, the current results extend past work on parental emotion socialization, indicating that supportive reactions may serve as a mechanism linking parental empathy to developmentally relevant positive peer outcomes during the preschool and toddler years. By examining mothers and fathers together in the same models, our findings suggest that mothers and fathers contribute to children's later socioemotional development in similar ways. Taken together, our findings underscore the importance of including fathers and assessing positive child outcomes at multiple developmental stages.

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