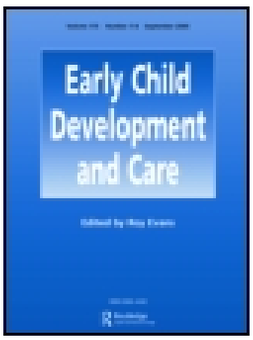

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Sibling relationships and mothers' and fathers' emotion socialization practices: a within-family perspective

Haley E. Yaremych and Brenda L. Volling

Department of Psychology, University of Michigan, Ann Arbor, MI, USA

ABSTRACT

This study examined the links between mothers' and fathers' emotion socialization practices and social behaviour between siblings. We utilized parent reports from 57 two-parent families with preschool- and toddler-aged siblings to assess parental responses to children's negative emotions, as well as siblings' engagement in positive involvement, conflict, and avoidance. Findings indicated that fathers', but not mothers', supportive and non-supportive emotion socialization strategies with the older sibling accounted for a significant amount of variance in older siblings' rivalry, aggression, and avoidance. Additionally, older siblings' rivalry/aggression and avoidance were positively linked to fathers' non-supportive reactions to both the older *and* younger siblings' negative emotions, highlighting the importance of a within-family approach to emotion socialization to elucidate effects across parents and siblings. Further research is needed to disentangle cause and effect relations among siblings' socio-emotional development and parents' emotion socialization practices.

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Emotion socialization; siblings; fathers; parents

The ability to regulate and express emotion in social settings is essential for children's well-being throughout all stages of development, as it aides them in establishing secure attachments with caregivers, positive peer relationships, social adaptation skills, and more positive engagement in school (Eisenberg, Eggum-Wilkens, & Spinrad, 2015; Hastings, McShane, Parker, & Ladha, 2007; Lindsey, Cremeens, & Caldera, 2010; McHale, Johnson, & Sinclair, 1999). The current study employed a family systems framework (Cox & Paley, 1997) to examine the roles of the mother-child, father-child, and sibling subsystems in young children's socio-emotional development, particularly between siblings. Family systems theory posits that parent-child, sibling, and coparental relationships constitute mutually interrelated subsystems within the family, and that each relationship subsystem is reciprocally related to other subsystems and family members (Cox & Paley, 1997). Positive emotion socialization practices, such as supportive reactions to negative emotions, explanation and labelling of others' mental states, and discussion of prosocial behaviour, have been directly related to children's empathic development in prior studies (Brownell, Svetlova, Anderson, Nichols, & Drummond, 2013; Hastings et al., 2007; Nelson, O'Brien, Blankson, Calkins, & Keane, 2009), and negative emotion socialization practices, such as punitive or minimization responses to children's negative emotions, have repeatedly been linked to poor emotional regulation and disruptive social behaviour (Eisenberg, Fabes, & Murphy, 1996; Gottman, Katz, & Hooven, 1996; Lunkenheimer, Shields, & Cortina, 2007). Despite the links between emotion socialization practices and children's social outcomes, prior work has not considered how parental emotion socialization is associated with the exchange of

CONTACT Haley E. Yaremych yaremych@umich.edu Social and Behavioral Research Branch, National Institute for Human Genome Research, Bldg 31 Rm B1B36, 31 Center Drive, Bethesda, MD 20814, USA

prosocial and antagonistic behaviours within sibling interactions. Further, the extant literature has focused almost exclusively on maternal emotion socialization despite promising findings that suggest fathers play an important role in children's emotional development (Diener, Mangelsdorf, McHale, & Frosch, 2002; McDowell, Kim, O'Neil, & Parke, 2002; Parke & McDowell, 1998; Zeman, Penza, Shipman, & Young, 1997). Utilizing a family systems perspective, the first aim of the current study was to examine whether mothers' and fathers' socialization practices were related to children's social behaviours with a sibling. The second aim was to investigate whether parents' emotion socialization practices with one sibling were related to the behaviours of the other sibling.

The development of prosocial and antisocial behaviours in the sibling relationship

The first aim of the study was to examine how mothers' and fathers' supportive and non-supportive emotion socialization practices were related to prosocial and rivalrous social behaviour displayed between preschool- and toddler-aged siblings. Key cognitive developments that occur during the second year of life include self-other differentiation and perspective-taking, which allow children to understand the emotional states of others, and thus implement social behaviours (Eisenberg et al., 2015; Zahn-Waxler, Radke-Yarrow, Wagner, & Chapman, 1992). Prosocial behaviours in toddlerhood have repeatedly been linked to greater social-cognitive understanding, whereas disruptive and aggressive behaviours in toddlerhood have been linked to poorer social-cognitive skills, such as delayed development of affective perspective-taking and lower false-belief understanding (Minde, 1992; Wellman, Lane, LaBounty, & Olson, 2011).

Social and emotional behaviour often develops and is expressed within children's sibling relationships, yet sibling relationships are not often studied. As Kramer (2014) noted in her review, work grounded in family systems theory has emphasized the formative role of the sibling relationship as a training ground for emotion socialization, both in conjunction with parents' practices and within itself, because siblings often act as reciprocal teachers and learners out of view of parents. Sibling relationships are characterized by reciprocity and mutuality, and these qualities are important contexts for children's social development (Dunn & Munn, 1986). Further, sibling interactions are rather unique in that they can be both reciprocal (e.g. mutual engagement in play and sharing of affect) and complementary (e.g. older siblings teaching the younger) in nature (Dunn, 1983; Harrist et al., 2014). Capacities that are essential for prosocial behaviour to occur, such as understanding appropriate ways to respond to another's distress, can be fostered during interactions with a sibling (Dunn, 2002; Maynard, 2016). Indeed, prosocial behaviours have been consistently observed between siblings in toddlerhood. In their landmark study, Dunn and Munn (1986) found that by 18 months, young siblings displayed the capacity for sharing, helping, comforting, and cooperating with each other. The perspective-taking capacities fostered in the sibling relationship also enable young siblings to understand how to provoke and upset one another (Dunn & Munn, 1986). Just as the sibling relationship can function as a context for prosociality, it can also function as a context in which children learn and develop aggressive patterns of behaviour (Song, Volling, Lane, & Wellman, 2016). Sibling conflict occurs frequently in early childhood (Perlman, Ross, & Garfinkel, 2009) and at moderate levels, may serve as a mechanism by which young children internalize rules about social conduct and develop socio-emotional regulation (Caspi & Barrios, 2016; Maynard, 2016). However, the sibling context may also foster aggression and destructive conflict (Garcia, Shaw, Winslow, & Yaggi, 2000).

Emotion socialization and sibling relationships

Parents' supportive emotion socialization fosters children's ability to understand their own and others' emotions, and to regulate their emotions effectively; it may include strategies such as explaining, labelling, and discussing emotions, and encouraging emotional expressiveness (Hastings, Miller, & Troxel, 2015, p. 647). These practices foster children's abilities to identify and understand the

internal states of others within relationships, and subsequently implement an appropriate behavioural response (Brownell et al., 2013). In contrast, parents' non-supportive emotion socialization practices include ignoring, minimizing, or dismissing the child's negative emotions, reprimanding the child for expressing negative emotions, and engaging in mutual negative affect (Miller-Slough, Dunsmore, Zeman, Sanders, & Poon, 2017). Such strategies lead young children to perceive negative emotions as threatening and convey to children that their negative emotions are unacceptable. These messages may thwart children's abilities to understand, and thus, regulate their own emotions (Davies & Cummings, 1994; McElwain, Halberstadt, & Volling, 2007), leading to poor management of arousal, social interactions, and behaviour.

Indeed, the connections between emotion socialization practices and children's socio-emotional development have been well documented. Parents' reinforcement of prosocial behaviours, their provision and elicitation of labels of others' emotional states, and their expression of positive emotion with the child have all been linked to greater social understanding and prosocial behaviour by toddlers (Brownell et al., 2013; Gross et al., 2015; Hastings et al., 2007). Parents' minimizing, punitive, and dismissive responses to negative emotion have frequently been linked to poorer emotion regulation, greater maladaptive coping, lower social skills, and behavioural problems at school (Eisenberg et al., 1996; Lunkenheimer et al., 2007). In the current study, we expand work on parental emotion socialization by examining children's social behaviours with a sibling, hypothesizing that mothers' and fathers' supportive emotion socialization will be linked to prosocial sibling relations, whereas unsupportive emotion socialization should be related to more sibling rivalry and conflict.

The importance of fathers and the sibling context

Studies regarding the impact of parents' emotion socialization practices on toddlers' development have focused almost exclusively on mothers. Yet, recent findings have suggested that fathers make unique contributions to their children's emotional development via emotion socialization, and that the sibling relationship is indeed a useful context for studying this development. With regard to father involvement, McElwain et al. (2007) found that fathers' supportive reactions to negative emotion uniquely predicted their children's emotion understanding above and beyond mothers' emotion socialization. Miller-Slough et al. (2017) found evidence of a 'father-dominant' cluster of families in which mothers displayed few supportive or non-supportive reactions to children's negative emotions whereas fathers displayed high levels of both; however, children in this cluster displayed the lowest levels of social competence. Finally, Shewark and Blandon's (2015) study is at present the only work to have examined emotion socialization practices among mothers, fathers, and two children in tandem. This work found that paternal non-supportive emotion socialization was related to lower emotional regulation, although only for older siblings. Taken together, current findings suggest that fathers play an important role in emotion socialization, and that mothers' and fathers' emotion socialization practices may be differently linked to older and younger siblings' emotional and behavioural outcomes.

Scholars have speculated that fathers' distinct influence on children's socio-emotional development may be due to the context in which they tend to interact with their children. In the toddler and preschool years, fathers more often take on the role of the playmate rather than the disciplinarian (Hallers-Haalboom et al., 2016), perhaps creating play contexts in which perspective-taking and cooperation are fostered. Indeed, in physical play, fathers tend to elicit high levels of destabilization and arousal in their young children, which may create the ideal setting in which youngsters learn to regulate intense emotions in response to the behaviour of their social partner (Parke & McDowell, 1998). Fathers may also provide the necessary scaffolding and discipline needed to inhibit aggressive responding (Paquette, 2004), particularly in response to sibling quarrels (Volling & Belsky, 1992).

A common playful context for young children is the interaction occurring between siblings. Older siblings generally take the more dominant role in early sibling relationships, and are often the teachers, managers, and leaders of social interactions with their younger siblings (Azmitia & Hesser,

1993; Brody, Stoneman, & MacKinnon, 1982). Older siblings initiate more prosocial as well as more antagonistic behaviours in interactions than their younger siblings (Abramovitch, Corter, & Lando, 1979; Berndt & Bulleit, 1985). As such, emotion socialization practices with older siblings may be particularly important in determining the quality of sibling interactions in this age group, both in terms of facilitating positive involvement and limiting sibling rivalry and aggression. Indeed, Volling and colleagues (Kolak & Volling, 2011; Volling & Belsky, 1992) have found that the father-older sibling relationship may be particularly influential in predicting social behaviour between siblings. For instance, Volling and Belsky (1992) found that more facilitative and supportive fathering toward 3-year-old firstborns uniquely predicted prosocial behaviour between siblings three years later, above and beyond mothering behaviours. Additionally, Kolak and Volling (2011) found that older siblings' displays of jealousy when fathers interacted with their 16-month-old toddler siblings predicted sibling conflict when these toddler siblings were 4 years of age. Finally, Van Berkel et al. (2015) found that paternal sensitivity toward an older sibling predicted sharing behaviours between 12- and 36-month-old sibling dyads. Taken together, the literature suggests that the father-older sibling relationship context may provide a unique opportunity for emotion socialization and management of both prosocial and aggressive behaviours between siblings in early childhood.

Differential emotion socialization and a within-family perspective

The second aim of this investigation was to explore the within-family effects of emotion socialization by examining cross-parent and cross-sibling associations, and determining whether emotion socialization practices directed toward one sibling would be associated with the social behaviours of the opposite sibling. This aim is consistent with a family systems perspective that emphasizes that parenting behaviours may vary across different parent-child dyads, and that behaviours in one dyadic relationship (parent-child) are related to other family relationships (Cox & Paley, 1997), as well as research on differential parental treatment and sibling relationship outcomes. Indeed, prior research has documented that parental differential treatment of more warmth and less control directed at one sibling in relation to the other is often related to higher self-esteem and less problem behaviours in the 'favoured' sibling (Conger & Conger, 1994; Meunier, Wade, & Jenkins, 2012). Volling and Elins (1998), however, found that this was not always true for siblings in early childhood. More parental discipline directed toward the older preschool sibling than the younger 16-month-old toddler predicted better, not worse, social outcomes, suggesting that more control of an older, stronger, and wiser sibling may be age-appropriate at this developmental stage. To our knowledge, no prior study has examined differential emotion socialization (i.e. how parents treat one sibling) and its links with the other sibling's behaviours. As such, this aspect of the research was exploratory and we did not create directional hypotheses regarding the effects of supportive or non-supportive parental reactions with one sibling on the behaviours displayed by the other sibling.

In summary, there were two aims to the current study. The first aim was to examine how mothers' and fathers' supportive and non-supportive emotion socialization were related to social behaviours displayed between young siblings. We hypothesized that supportive maternal and paternal emotion socialization practices would be related to positive engagement between siblings, and non-supportive emotion socialization practices would be related to sibling rivalry, aggression and avoidance. We also sought to further elucidate fathers' roles in siblings' socio-emotional development, expecting that fathers' emotion socialization, particularly with older siblings, would be uniquely related to sibling relationship quality above and beyond mothers' emotion socialization because of prior research underscoring this connection. Our second aim was to examine whether mothers' and fathers' emotion socialization practices with one sibling were related to behaviours of the other sibling, based on notions of differential family experiences and a within-family perspective.

Method

Participants

Fifty-seven married heterosexual couples and their two children were recruited as part of a study examining marital relationship quality and children's development. Families were recruited from birth records, newspaper advertisements, and bulletins at churches, day cares, and preschools. Given the overall goal of the study to examine the effects of marital interaction on children's social and emotional development, families had to meet three criteria to be eligible for participation: (1) couples had to self-identify as happily married; (2) have a child who was 2 years of age; and (3) an older child in preschool or early elementary school.

Mothers were, on average, 35 years of age ($SD = 4.6$), whereas fathers were, on average, 37 years of age ($SD = 4.6$), and all parents had completed at least some college. Mothers and fathers were predominantly European American ($n = 54$ and $n = 56$, respectively), with 1 Asian American mother and 1 Hispanic mother, and 1 Asian American father and 3 Hispanic fathers. Most families were middle or upper-middle class; 8.5% of couples reported a combined income of less than $50,000 ($n = 5$), 50.8% of couples reported a combined income of $50,000–$100,000 ($n = 30$), and 39% of couples reported a combined income of over $100,000 ($n = 23$). Couples had been married for an average of 8.7 years ($SD = 3.4$). The mean age of the older sibling was 57.5 months ($SD = 11.6$), whereas the mean age of the younger sibling was 26.5 months ($SD = 2.9$). In 85% of sibling dyads, the older sibling was firstborn and the younger sibling was secondborn ($n = 48$), 10% of dyads were secondborn and thirdborn ($n = 6$), and 5% of dyads were both laterborn children ($n = 3$). Sibling dyads in the sample included 16 girl-girl dyads, 14 boy-boy dyads, 11 boy-girl dads (older-younger), and 17 girl-boy (older-younger) dyads.

Procedures

Families participated in two laboratory visits, each lasting three hours that occurred approximately one month apart. Visits were conducted in a laboratory 'living room' setting that included a couch, loveseat, chairs, tables, and several toys. In the first visit, couples participated in videotaped marital communication tasks (see Rauer & Volling, 2013), and both spouses received a packet of questionnaires that assessed marital, parenting, and sibling characteristics. The second visit included all family members (mother, father, and both children) and assessed parenting, coparenting, and both siblings' prosocial behaviours during several experimental observational tasks. Families received $50 for participating, and each sibling received a small gift. Data for this report were drawn from parent reports of emotion socialization and sibling interactions. Prior reports using this data set have focused on observations of marital interaction, marital social support, moral socialization and children's conscience development, and the development of sibling jealousy using observational laboratory methods (see Blandon & Volling, 2008; Jensen, Rauer, & Volling, 2013; Rauer & Volling, 2013, 2015; Volling, Mahoney, & Rauer, 2009)

Measures

Emotion socialization practices

Mothers and fathers completed the Coping with Children's Negative Emotions Scale (CCNES; Fabes, Poulin, Eisenberg, & Madden-Derdich, 2002). Parents each completed the scale twice, once for the older sibling and once for the younger sibling. The CCNES consists of 12 hypothetical situations in which the child expresses distress (e.g. 'If my child becomes angry because he/she is sick or hurt and can't go to his/her friend's birthday party, I would … '). Using 7-point scales ranging from 1 (*very unlikely*) to 7 (*very likely*), parents indicated their likelihood of responding to the situation in each of six possible ways, which yields six subscales: *distress reactions*, (e.g. 'get angry at my child'),

punitive reactions (e.g. 'send my child to his/her room to cool off'), *minimization reactions* (e.g. 'tell my child not to make a big deal out of missing the party'), *expressive encouragement* (e.g. 'encourage my child to express his/her feelings of anger and frustration'), *emotion-focused reactions* (e.g. 'soothe my child and do something fun with him/her to make him/her feel better about missing the party'), and *problem-focused reactions* (e.g. 'help my child think about ways that he/she can still be with friends'). The six subscales can be composited further into *supportive reactions* (expressive encouragement, emotion-focused, and problem-focused) and *non-supportive reactions* (distress, punitive, and minimization) based on prior research on the psychometric properties of the CCNES (see Fabes et al., 2002). Subscales were averaged to create eight composites: mothers' *supportive reactions* with the older sibling, mothers' *non-supportive reactions* with the older sibling, mothers' *supportive reactions* with the younger sibling, mothers' *non-supportive reactions* with the younger sibling, and the same four composites for fathers.

Cronbach's alphas were good to excellent in the current study for fathers' supportive reactions with older ($\alpha = .73$) and younger ($\alpha = .70$) siblings, and non-supportive reactions with older ($\alpha = .84$) and younger ($\alpha = .82$) siblings. Alphas for mothers' supportive reactions with older ($\alpha = .72$) and younger ($\alpha = .59$) siblings, and non-supportive reactions with older ($\alpha = .73$) and younger ($\alpha = .65$) siblings were lower, but still within the acceptable range of alphas used in similar studies (Cassano, Perry-Parrish, & Zeman, 2007; Moos, 1990; Peterson, 1994; Shewark & Blandon, 2015). Despite the lower alpha for mothers' supportive reactions with younger siblings, we elected to keep the scale in later analyses in order to meet the aims of the research, but acknowledge that results must be interpreted with caution.

Older siblings' social behaviours

Mothers and fathers completed the Sibling Inventory of Behaviour (SIB; Schaefer & Edgerton, 1981) to assess the older siblings' behaviours toward their younger sibling. The SIB is a widely-used measure of sibling interaction with good to excellent psychometric properties (see Volling & Blandon, 2005, for a review of the SIB). The measure consists of 32 items answered on a 5-point scale ranging from 1 (*never*) to 5 (*always*) that assessed the extent to which children engaged in various prosocial and antisocial behaviours with their sibling. The measure yields six subscales: *rivalry* (e.g. 'takes advantage of younger sibling'); *aggression* (e.g. 'gets angry with younger sibling'); *avoidance* (e.g. 'stays away from younger sibling if possible'); *involvement* (e.g. 'accepts younger sibling as a playmate'); *empathy* (e.g. 'tries to comfort younger sibling when s/he is unhappy or upset'); and *teaching* (e.g. 'teaches younger sibling new skills'). Mother and father reports were significantly positively correlated for all subscales ($rs = 0.43–0.59$, $ps < 0.01$) except teaching ($r = 0.18$), so scores were averaged across parents to create more robust composites, and reduce single-reporter bias and shared method variance. Consistent with prior research (Volling & Blandon, 2005), rivalry and aggression were highly correlated ($r = 0.67$, $p < 0.01$) so they were averaged to create a *Rivalry/Aggression* composite score (Cronbach's $\alpha = 0.80$). Involvement, empathy, and teaching were also highly correlated ($rs = 0.51–0.73$, $ps < 0.01$) so they were averaged to create a *Positive Involvement* composite (Cronbach's $\alpha = 0.84$).

Younger siblings' social behaviours

Given the young age of the 2-year-old toddlers and the fact that several items on the SIB are not appropriate for this age group, parents completed the Sibling Relationships in Early Childhood Questionnaire (SREC; Volling & Elins, 1998) for the younger siblings. The SREC is an 18-item scale, similar to the SIB with some items omitted, and others added to be appropriate for the age of the younger sibling, and yields three subscales: *Positive Involvement* (e.g. 'initiates play with older sibling'); *Conflict and Rivalry* (e.g. 'teases or annoys older sibling'); and *Avoidance* (e.g. 'is happy when older sibling goes away'). Alphas ranged from 0.71 to 0.83 for fathers, and 0.56–0.71 for mothers. Because of the low alpha (.56) for mother reports of *Avoidance,* the avoidance scale for the younger sibling was dropped from further analyses. Fathers' and mothers' reports were positively correlated for positive

involvement ($r = 0.35$, $p = 0.01$) and conflict/rivalry ($r = 0.35$, $p = 0.01$), so they were averaged to create more robust composites.

Results

Preliminary analyses

Preliminary analyses were conducted to investigate relations between demographics (race, income, and education), family structural variables (age, gender, length of marriage, birth order, dyadic gender composition), and the sibling behaviour variables to determine a need for covariates in subsequent multiple regression analyses. An independent samples *t*-test revealed that older siblings' positive involvement differed significantly by older siblings' gender, with girls displaying significantly more positive involvement than boys, $t(55) = -3.81$, $p < 0.01$. Older siblings' avoidance was positively correlated with the age of the older sibling, $r(57) = 0.32$, $p = 0.02$. No other demographic or family structural variables (e.g. birth order, gender dyad) were related to older siblings' behaviour variables. Further, there were no significant relations between demographic or family structural variables and younger sibling behaviour variables. Thus, only the older siblings' age and gender were included as covariates in later regression analyses.

Emotion socialization and sibling social behaviour

Table 1 summarizes correlations between mothers' and fathers' emotion socialization practices and sibling behaviours. Older siblings' rivalry/aggression and avoidance were significantly and positively correlated with fathers' non-supportive and supportive reactions toward the older sibling. Younger siblings' conflict/rivalry was positively correlated with both fathers' and mothers' non-supportive reactions toward the younger sibling.

Multivariate hierarchical regressions

The next analyses were designed to move beyond univariate analyses and take a multivariate perspective. To reduce the likelihood of Type I errors, we limited the number of analyses conducted and built the hierarchical regression models based on the significant univariate correlations presented in Table 1. Separate models were constructed to predict older siblings' rivalry/aggression and avoidance because these were the only two outcomes for which there were multiple significant correlations ($p < 0.05$) with emotion socialization. Because of the lack of significant relations for younger siblings, the regression analyses were performed only for the older sibling outcomes. In

Table 1. Correlations between parents' emotion socialization and older and younger siblings' behaviour ($n = 57$).

Measure	Older Sibling			Younger Sibling	
	Riv/Agg	Avoidance	Pos Inv	Conflict/Riv	Pos Inv
Father-Older Sibling					
Non-Supportive	0.28*	0.31*	−0.17	0.21	−0.05
Supportive	0.30*	0.26†	−0.15	0.12	−0.13
Mother-Older Sibling					
Non-Supportive	0.11	0.21	−0.02	0.10	0.16
Supportive	0.07	0.03	0.04	−0.04	0.00
Father-Younger Sibling					
Non-Supportive	0.33*	0.31*	−0.15	0.24†	0.04
Supportive	0.13	0.02	−0.07	0.10	−0.09
Mother-Younger Sibling					
Non-Supportive	0.07	0.04	0.06	0.28*	0.23†
Supportive	−0.07	−0.07	0.18	0.13	0.18

Note: † $p < 0.10$, * $p < 0.05$, ** $p < 0.01$. Riv/Agg = rivalry and aggression. Conflict/Riv = conflict and rivalry. Pos Inv = positive involvement.

each model, older siblings' age and gender were entered in Step 1, mother-reported supportive and non-supportive reactions toward the older sibling were entered in Step 2, father-reported supportive and non-supportive reactions toward the older sibling were entered in Step 3, and two-way interaction terms (mother-supportive × father-supportive, mother-non-supportive × father-non-supportive) were entered in Step 4 in order to assess possible moderating effects of mothering and fathering at the family level. We did not build models to predict older siblings' positive involvement, or any younger sibling behaviour variables, due to no or few significant correlations with parenting variables. To minimize multicollinearity among the direct effects and interaction terms, parents' emotion socialization variables were centred.

Table 2 summarizes results of the hierarchical regressions predicting older siblings' rivalry/aggression and avoidance, with emotion socialization practices toward the older sibling as predictors. For older siblings' rivalry/aggression, no significant variance was explained by child characteristics or by mothers' emotion socialization variables. Only fathers' supportive and non-supportive emotion socialization accounted for significant variance, explaining a unique 17% when entered in Step 3. No additional variance was explained by including the interactions in Step 4. Standardized coefficients from the final model indicated that both fathers' supportive and non-supportive reactions uniquely predicted rivalry/aggression above and beyond all other variables in the final model.

Similar findings emerged for older siblings' avoidance (see Table 2). In Step 3, fathers' supportive and non-supportive emotion socialization toward the older sibling explained a significant 15% of unique variance in older siblings' avoidance. No significant variance was accounted for when mothers' emotion socialization was included either independently (Step 2) or in interactions with fathers' emotion socialization (Step 4). Standardized coefficients from the final model (Step 4) indicated that fathers' supportive and non-supportive reactions uniquely predicted avoidance above

Table 2. Parents' emotion socialization practices with older sibling as predictors of older siblings' rivalry/aggression and avoidance.

	Rivalry/Aggression			Avoidance		
Predictors	β	R^2	ΔR^2	β	R^2	ΔR^2
Step 1		0.05	–		0.11*	–
		$F(2, 52) = 1.46$	–		$F(2, 52) = 3.19$*	–
Child age	0.09			0.32*		
Child gender	−0.21			−0.06		
Step 2		0.08	0.03		0.15†	0.04
		$F(2, 50) = 1.09$	$\Delta F = 0.74$		$F(2, 50) = 2.25$†	$\Delta F = 1.28$
Child age	0.08			0.31*		
Child gender	−0.21			−0.07		
M Support	0.13			0.17		
M Nonsupport	0.16			0.20		
Step 3		0.25*	0.17**		0.30**	0.15*
		$F(2, 48) = 2.72$*	$\Delta F = 5.59$**		$F(2, 48) = 3.42$**	$\Delta F = 5.04$*
Child age	0.01			0.24†		
Child gender	−0.20			−0.06		
M Support	0.15			0.20		
M Nonsupport	0.15			0.18		
F Support	0.34*			0.29*		
F Nonsupport	0.30*			0.30*		
Step 4		0.27*	0.03		0.30*	0.00
		$F(2, 46) = 2.18$*	$\Delta F = 0.66$		$F(2, 46) = 2.48$*	$\Delta F = 0.04$
Child age	0.01			0.25†		
Child gender	−0.24†			−0.04		
M Support	0.09			0.21		
M Nonsupport	0.19			0.17		
F Support	0.33*			0.29*		
F Nonsupport	0.29*			0.31*		
MxF Support	−0.16			0.04		
MxF Nonsupport	−0.03			−0.01		

Note: Child gender: male = 0, female = 1. M = mother, F = father. † $p < 0.10$, * $p < 0.05$, ** $p < 0.01$. Reported β's are standardized coefficients.

Table 3. Means and standard deviations of emotion socialization variables as a function of parent gender and sibling ($n = 57$).

	Parent				Sibling			
Behaviour	Father	Mother	$F(1, 52)$	η_p^2	Older	Younger	$F(1, 52)$	η_p^2
Non-Supportive Reactions			4.74*	0.08			1.59	0.03
M	2.62	2.40			2.54	2.48		
SD	(0.10)	(0.07)			(0.08)	(0.07)		
Supportive Reactions			18.35***	0.26			1.80	0.03
M	4.93	5.41			5.21	5.12		
SD	(0.10)	(0.08)			(0.07)	(0.08)		

Note: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. η_p^2 = partial eta squared.

Table 4. Intercorrelations for emotion socialization variables ($n = 57$).

Measure	1	2	3	4
1. M Supportive	**0.50****	−0.39**	0.13	−0.30*
2. M Non-Supportive	0.10	**0.59****	−0.23†	0.37**
3. F Supportive	0.26†	−0.02	**0.67****	−0.12
4. F Non-Supportive	−0.19	0.30*	−0.03	**0.80****

Note: M = mother, F = father. Correlations above the diagonal reflect correlations for the older sibling, and those below the diagonal reflect correlations for the younger sibling. Cross-sibling correlations are along the diagonal in bold. † $p < 0.10$, * $p < 0.05$, ** $p < 0.01$.

and beyond all other variables. Older siblings' age was also a significant predictor in the final model, indicating that older children were significantly more likely to avoid their younger siblings than younger children.

Within-family similarities, differences, and relations

To address our second aim, we first conducted a series of 2 (parent) × 2 (sibling) mixed model ANOVAs, with both parent and sibling as repeated measures, to investigate differences between mothers' and fathers' emotion socialization practices with older and younger siblings (see Table 3). Significant parent effects indicated that fathers reported more non-supportive reactions than mothers, and mothers reported more supportive reactions than fathers. There were no significant sibling main effects or parent x sibling interactions.

We also examined correlations between mothers' and fathers' emotion socialization practices to elucidate whether mothers' and fathers' emotion socialization was consistent across parents and across siblings; see Table 4. For both mothers and fathers, supportive reactions toward the older and younger sibling were positively correlated, and non-supportive reactions toward the older and younger sibling were positively correlated. For both the older and younger sibling, maternal and paternal non-supportive reactions were positively correlated.

Additionally, as can be seen in Table 1, older siblings' rivalry/aggression was significantly correlated with fathers' non-supportive reactions toward both the older sibling *and* the younger sibling. This was also true for older siblings' avoidance. As a final analysis, we tested whether parental behaviour with one sibling (e.g. younger sibling) predicted the other siblings' behaviour toward that sibling (e.g. older siblings' behaviour toward younger sibling) consistent with prior work on differential parental treatment and a within-family perspective (Blandon & Volling, 2008). Based on correlations in Table 1, we built hierarchical regression models to predict older siblings' rivalry/aggression and avoidance, because fathers' non-supportive emotion socialization with both the older and younger sibling were correlated with these outcomes. Step 1 included the age and gender of the older sibling. In Step 2, fathers' non-supportive reactions toward the older sibling and non-supportive reactions toward the younger sibling were entered. In Step 3, a two-way interaction term (fathers' non-supportive older sibling × fathers' non-supportive younger sibling) was added. None of these models yielded significant interactions.

Discussion

The goal of the current study was to bring a family systems and within-family perspective to emotion socialization by examining mothers' and fathers' emotion socialization practices with two children, and their links to siblings' social behaviour. In so doing, we were particularly interested in elucidating the distinct role of fathers, given prior research underscoring the importance of fathers for the development of emotion regulation (Hastings et al., 2007; Lindsey, Caldera, & Rivera, 2013; Lindsey et al., 2010; McElwain et al., 2007; Miller-Slough et al., 2017), and positive sibling interactions (Kolak & Volling, 2011; Van Berkel et al., 2015; Volling & Belsky, 1992). We found that fathers employed more non-supportive and less supportive reactions to children's negative emotions than mothers, which is consistent with prior research that has included mothers and fathers (Baker, Fenning, & Crnic, 2011; Cassano et al., 2007; McElwain et al., 2007).

In line with a family systems approach, and to address our first study aim, we conducted both univariate and multivariate analyses to assess the unique and joint contributions of mothers' and fathers' emotion socialization in predicting siblings' behaviours toward each other. Our findings are particularly noteworthy in light of the general lack of research into the role of fathering in children's emotional development, and contribute to the literature by elucidating the link between fathers' emotion socialization practices and children's socio-emotional behaviours within the sibling context. Hierarchical regressions revealed that fathers' supportive and non-supportive reactions to older siblings' negative emotions were each uniquely related to older siblings' rivalry/aggression and avoidance, whereas mothers' emotion socialization was not. Although we hypothesized that non-supportive emotion socialization would be linked to greater rivalry/aggression and avoidance, we were surprised to find that fathers' supportive reactions to children's negative emotion were also linked to negative behaviour. What accounts for these findings is not clear, but one possibility may lie in the inconsistent application of positive and negative emotion socialization to emotionally-charged family situations including sibling conflict. Sibling aggression and rivalry may actually be intensified when children's negative emotions are sometimes met with sensitivity and encouragement to express negative affect, and other times punished or minimized (see Mirabile, 2014).[1]

Because relations between parent-child and sibling subsystems are bidirectional and reciprocal, it is also possible that findings are due to parents' responses to children's behaviour, and not solely a direct effect of parents on children. When older siblings are more aggressive, for instance, toward their younger siblings, fathers may employ a variety of emotion socialization strategies to terminate the aggressive behaviour; this may explain why sibling conflict, rivalry, and avoidance appeared to be related to more paternal emotion socialization practices, both positive and negative. Indeed, Kramer, Perozynski, and Chung (1999) observed that young children frequently complain to or seek resolution from a parent after a sibling dispute, at which point the parent must decide whether to employ positive emotion socialization strategies, diminish the conflict via minimization or punishment, or avoid intervening altogether. Older siblings may simply employ fathers more frequently to referee negative sibling interactions; this would be consistent with prior work that has underscored the contributions of the father-older sibling relationship to the socio-emotional development of young children (Kolak & Volling, 2011; Van Berkel et al., 2015; Volling & Belsky, 1992). Given that older siblings are often the leaders and managers of sibling relationships (Azmitia & Hesser, 1993; Brody et al., 1982), it follows that fathers' practices with older siblings may indeed contribute to the sibling relationship as a whole. The cross-sectional design of the current study does not lend itself to disentangling these potential bidirectional relations, and future longitudinal research is clearly needed to address these possibilities further. In any event, the finding that fathers' emotion socialization practices were significantly related to older siblings' behaviour toward a younger, more vulnerable sibling is an important contribution to the literature and presents implications for the development of interventions to assist parents in their attempts to resolve sibling conflicts. Our findings underscore the necessity of providing support and education to fathers in order to prepare them for successful mitigation of sibling quarrels, particularly regarding the practices they direct toward an older sibling as

they experience heightened arousal and negative emotion during episodes of conflict. Future interventions will need to encourage fathers' provision of consistently supportive emotion socialization practices throughout disciplinary encounters.

Contrary to our hypothesis, neither mothers' nor fathers' supportive reactions to negative emotion were linked to older or younger siblings' positive involvement with one another. It is possible that socialization of negative emotions may not predict positive involvement, such as engagement in teaching and play. Rather, parents' socialization of positive, not negative, emotions may be more strongly linked to siblings' positive engagement. Indeed, Shewark and Blandon (2015) examined parents' responses to both positive and negative emotion, and found that fathers' responses to both types of emotion jointly contributed to children's socio-emotional outcomes. Future studies should consider parents' socialization of both negative and positive emotion in order to disentangle relations across a broader range of young siblings' social behaviours.

Our second aim was to investigate whether emotion socialization practices within family subsystems may be linked to behaviours within other subsystems, and whether parents' emotion socialization practices with one sibling may be linked to the behaviour of the other sibling. Indeed, our results underscore the interrelated nature of family relationships, reiterating that relational dynamics are interconnected and may spill over across multiple familial subsystems. First, we found that the social behaviours of older siblings (i.e. rivalry/aggression and avoidance) were related to fathers' emotion socialization practices directed toward themselves, as well as those directed toward their younger sibling. Additionally, even though mothers used more supportive reactions than fathers and fathers used more non-supportive reactions than mothers, there were no cross-sibling differences in mothers' and fathers' use of supportive or non-supportive emotion socialization practices, suggesting that mothers and fathers were likely to respond similarly to the negative emotions of their 2-year-old toddlers and their preschool-aged older siblings in this sample. Correlational analyses revealed further evidence of consistency in parental emotion socialization across older and younger siblings in the same family, in that there were significant positive correlations (i.e. consistent rank order differences) between mothers' and fathers' supportive and non-supportive reactions toward older and younger siblings, and this was particularly evident for fathers' non-supportive reactions toward both siblings. These findings replicate those from the only other study to examine emotion socialization with siblings (Shewark & Blandon, 2015), in which both mothers' and fathers' supportive and non-supportive responses to negative and positive emotion were highly correlated across siblings. Because few studies consider emotion socialization beyond a single mother-child dyad, future research may benefit from taking a family systems approach to broaden our understanding of emotion socialization and examining the complex relations between family members. Further, more work is needed to consider how older siblings may be important socializers of emotional experiences for their younger siblings. For example, Howe, Ross, and Recchia (2011) noted in their review that older siblings consistently act as teachers, while younger siblings act as learners, throughout childhood; it is likely that older siblings also offer meaningful contributions to younger siblings' emotion socialization processes, which should be explored in future studies.

The current investigation contributes to the growing body of fathering research by investigating the specific role of paternal emotion socialization practices in children's socio-emotional development, as well as taking into account the sibling context. We aimed to improve the methodology of prior work in important ways, by statistically controlling for mothering behaviours in order to extract fathers' unique influence (Paquette, Coyl-Shepherd, & Newland, 2013), by obtaining self-report data from mothers and fathers rather than from mothers only, and by averaging across parent reports to create more robust composites of sibling behaviour, thus reducing single-reporter bias and shared method variance (Leidy, Schofield, & Parke, 2013). Limitations of the current study also merit consideration. Our sample was comprised of mostly middle-to-upper-class Caucasian families with low risk family circumstances. Additionally, the original study was designed to assess the effects of marital relationship quality for heterosexual couples reporting high marital satisfaction, and their young children. This design may have limited the variability in parental socialization

practices in the sample and resulted in a very selective sample of families. Future research is needed that includes families from varying sociodemographic and racial/ethnic backgrounds, same-sex couples, and families under economic and psychosocial stress. Additionally, our sample size was relatively small, which limited our ability to detect small effects and find significant associations. Mothers' reports of their supportive behaviours toward the younger sibling yielded a somewhat low alpha of 0.59, so results involving this subscale should be interpreted with caution until they can be replicated in further work. Although we obtained self-reports from both mothers and fathers, we must also acknowledge that our findings may have differed had we utilized observational data from the laboratory or home setting; self-report data may not correspond perfectly with parents' real-world behaviours, and despite the compositing of reports from both parents, we must acknowledge that shared method variance is an inherent risk of using only self-report data (Locke & Prinz, 2002).

In summary, this study utilized a family systems perspective to investigate the relations between mothers' and fathers' emotion socialization practices and siblings' social behaviour within families, in an effort to further elucidate the unique role of fathers. We found evidence that fathers', but not mothers', supportive and non-supportive reactions to negative emotion were related to older siblings' rivalry/aggression and avoidance. We did not observe associations between supportive responses to children's negative emotion and prosocial sibling engagement. In order to disentangle the complex and undoubtedly longitudinal influences of emotion socialization in the family, future research will benefit from tracking mothers, fathers, and siblings over time, considering the socialization of both negative and positive emotions, and approaching these relations from a within-family perspective.

Note

1. We also ran a second series of multiple regression analyses to determine if the interactions between parental supportive and non-supportive emotion socialization would predict sibling behaviour and to help clarify our unexpected findings regarding paternal supportive reactions, but all interactions were nonsignificant.

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Notes on contributors

Haley Yaremych is currently a Post-Baccalaureate Research Fellow in the Social and Behavioural Research Branch of the National Institute for Human Genome Research (NHGRI). She received her Bachelor of Arts in Psychology from the University of Michigan. Her current research focuses on methods for communicating health and genetic information to mothers and fathers in order to facilitate health-promoting behaviour toward children. She is particularly interested in family systems theory and quantitative methods for studying the impact of mothers, fathers, and siblings in the context of children's emotional development.

Dr. Brenda Volling is currently a Research Professor at the Center for Human Growth and Development and Professor of Psychology at the University of Michigan. Her research focuses on the social and emotional development of infants, parent-infant interaction, and the role of family relationships in facilitating children's developmental outcomes. She has conducted extensive research on the role of fathers for infant development and is one of the leading experts on the development of infant-father attachment relationships. She was the recipient of an Independent Scientist Award from NICHD and received a Faculty Recognition Award for outstanding research, teaching and service at the University of Michigan. She recently received the MICHR Distinguished Clinical and Translational Research Mentor Award. She is also a Fellow of the Association for Psychological Science.

ORCID

Haley E. Yaremych http://orcid.org/0000-0002-5963-0758

References

Abramovitch, R., Corter, C. M., & Lando, B. (1979). Sibling interaction in the home. *Child Development*, *50*(4), 997–1003. doi:10.2307/1129325

Azmitia, M., & Hesser, J. (1993). Why siblings are important agents of cognitive development: A comparison of siblings and peers. *Child Development*, *64*(2), 430–444. doi:10.2307/1131260

Baker, J. K., Fenning, R. M., & Crnic, K. A. (2011). Emotion socialization by mothers and fathers: Coherence among behaviours and associations with parent attitudes and children's social competence. *Social Development*, *20*(2), 412–430.

Berndt, T. J., & Bulleit, T. N. (1985). Effects of sibling relationships on preschoolers' behaviour at home and at school. *Developmental Psychology*, *21*(5), 761–767. doi:10.1037/0012-1649.21.5.761

Blandon, A. Y., & Volling, B. L. (2008). Parental gentle guidance and children's compliance within the family: A replication study. *Journal of Family Psychology*, *22*(3), 355–366. doi:10.1037/0893-3200.22.3.355

Brody, G. H., Stoneman, Z., & MacKinnon, C. E. (1982). Role asymmetries in interactions among school-aged children, their younger siblings, and their friends. *Child Development*, *53*(5), 1364–1370. doi:10.2307/1129027

Brownell, C. A., Svetlova, M., Anderson, R., Nichols, S. R., & Drummond, J. (2013). Socialization of early prosocial behaviour: Parents' talk about emotions is associated with sharing and helping in toddlers. *Infancy*, *18*(1), 91–119. doi:10.1111/j.1532-7078.2012.00125.x

Caspi, J., & Barrios, V. R. (2016). Destructive sibling aggression. In C. A. Cuevas, C. M. Rennison, C. A. Cuevas, & C. M. Rennison (Eds.), *The Wiley handbook on the psychology of violence* (pp. 297–323). Wiley-Blackwell. doi:10.1002/9781118303092.ch16

Cassano, M., Perry-Parrish, C., & Zeman, J. (2007). Influence of gender on parental socialization of children's sadness regulation. *Social Development*, *16*(2), 210–231.

Conger, K. J., & Conger, R. D. (1994). Differential parenting and change in sibling differences in delinquency. *Journal of Family Psychology*, *8*(3), 287–302.

Cox, M. J., & Paley, B. (1997). Families as systems. *Annual Review of Psychology*, *48*, 243–267. doi:10.1146/annurev.psych.48.1.243

Davies, P. T., & Cummings, E. M. (1994). Marital conflict and child adjustment: An emotional security hypothesis. *Psychological Bulletin*, *116*(3), 387–411.

Diener, M. L., Mangelsdorf, S. C., McHale, J. L., & Frosch, C. A. (2002). Infants' behavioural strategies for emotion regulation with fathers and mothers: Associations with emotional expressions and attachment quality. *Infancy*, *3*(2), 153–174.

Dunn, J. (1983). Sibling relationships in early childhood. *Child Development*, *54*(4), 787–811. doi:10.2307/1129886

Dunn, J. (2002). Sibling relationships. In P. K. Smith, & C. H. Hart (Eds.), *Blackwell handbooks of developmental psychology. Blackwell handbook of childhood social development* (pp. 223–237). Malden: Blackwell Publishing.

Dunn, J., & Munn, P. (1986). Siblings and the development of prosocial behaviour. *International Journal of Behavioral Development*, *9*(3), 265–284. doi:10.1177/016502548600900301

Eisenberg, N., Eggum-Wilkens, N. D., & Spinrad, T. L. (2015). The development of prosocial behaviour. In D. A. Schroeder, W. G. Graziano, D. A. Schroeder, & W. G. Graziano (Eds.), *The Oxford handbook of prosocial behaviour* (pp. 114–136). New York, NY: Oxford University Press.

Eisenberg, N., Fabes, R. A., & Murphy, B. C. (1996). Parents' reactions to children's negative emotions: Relations to children's social competence and comforting behaviour. *Child Development*, *67*(5), 2227–2247.

Fabes, R. A., Poulin, R. E., Eisenberg, N., & Madden-Derdich, D. A. (2002). The coping with children's negative emotions scale (CCNES): Psychometric properties and relations with children's emotional competence. *Marriage & Family Review*, *34*(3–4), 285–310. doi:10.1300/J002v34n03_05

Garcia, M. M., Shaw, D. S., Winslow, E. B., & Yaggi, K. E. (2000). Destructive sibling conflict and the development of conduct problems in young boys. *Developmental Psychology*, *36*(1), 44–53. doi:10.1037/0012-1649.36.1.44

Gottman, J. M., Katz, L. F., & Hooven, C. (1996). Parental meta-emotion philosophy and the emotional life of families: Theoretical models and preliminary data. *Journal of Family Psychology*, *10*(3), 243–268.

Gross, R. L., Drummond, J., Satlof-Bedrick, E., Waugh, W. E., Svetlova, M., & Brownell, C. A. (2015). Individual differences in toddlers' social understanding and prosocial behaviour: Disposition or socialization? *Frontiers in Psychology*, *6*, 600. doi:10.3389/fpsyg.2015.00600

Hallers-Haalboom, E. T., Groeneveld, M. G., van Berkel, S. R., Endendijk, J. J., van der Pol, L. D., Bakermans-Kranenburg, M. J., & Mesman, J. (2016). Wait until your mother gets home! Mothers' and fathers' discipline strategies. *Social Development*, *25*(1), 82–98. doi:10.1111/sode.12130

Harrist, A. W., Achacoso, J. A., John, A., Pettit, G. S., Bates, J. E., & Dodge, K. A. (2014). Reciprocal and complementary sibling interactions: Relations with socialization outcomes in the kindergarten classroom. *Early Education and Development*, *25*(2), 202–222. doi:10.1080/10409289.2014.848500

Hastings, P. D., McShane, K. E., Parker, R., & Ladha, F. (2007). Ready to make nice: Parental socialization of young sons' and daughters' prosocial behaviours with peers. *The Journal of Genetic Psychology*, *168*(2), 177–200. doi:10.3200/GNTP.168.2.177-200

Hastings, P. D., Miller, J. G., & Troxel, N. R. (2015). Making good: The socialization of children's prosocial development. In J. E. Grusec, P. D. Hastings, J. E. Grusec, & P. D. Hastings (Eds.), *Handbook of socialization: Theory and research* (2nd ed., pp. 637–660). New York, NY: Guilford Press.

Howe, N., Ross, H. S., & Recchia, H. (2011). Sibling relations in early and middle childhood. In P. K. Smith, & C. H. Hart (Eds.), *Wiley Blackwell handbooks of developmental psychology. The Wiley Blackwell handbook of childhood social development* (pp. 356–372). Hoboken, NJ: Wiley-Blackwell.

Jensen, J. F., Rauer, A. J., & Volling, B. (2013). A dyadic view of support in marriage: The critical role of men's support provision. *Sex Roles*, *68*(7-8), 427–438. doi:10.1007/s11199-012-0256-x

Kolak, A. M., & Volling, B. L. (2011). Sibling jealousy in early childhood: Longitudinal links to sibling relationship quality. *Infant and Child Development*, *20*(2), 213–226. doi:10.1002/icd.690

Kramer, L. (2014). Learning emotional understanding and emotion regulation through sibling interaction. *Early Education and Development*, *25*(2), 160–184. doi:10.1080/10409289.2014.838824

Kramer, L., Perozynski, L. A., & Chung, T.-Y. (1999). Parental responses to sibling conflict: The effects of development and parent gender. *Child Development*, *70*(6), 1401–1414. doi:10.1111/1467-8624.00102

Leidy, M. S., Schofield, T. J., & Parke, R. D. (2013). Fathers' contributions to children's social development. In N. J. Cabrera, C. S. Tamis-LeMonda, N. J. Cabrera, & C. S. Tamis-LeMonda (Eds.), *Handbook of father involvement: Multidisciplinary perspectives* (2nd ed., pp. 151–167). New York, NY: Routledge/Taylor & Francis Group.

Lindsey, E. W., Caldera, Y. M., & Rivera, M. (2013). Mother–child and father–child emotional expressiveness in Mexican-American families and toddlers' peer interactions. *Early Child Development and Care*, *183*(3–4), 378–393. doi:10.1080/03004430.2012.711589

Lindsey, E. W., Cremeens, P. R., & Caldera, Y. M. (2010). Mother-child and father-child mutuality in two contexts: Consequences for young children's peer relationships. *Infant and Child Development*, *19*(2), 142–160.

Locke, L. M., & Prinz, R. J. (2002). Measurement of parental discipline and nurturance. *Clinical Psychology Review*, *22*(6), 895–929. doi:10.1016/S0272-7358(02)00133-2

Lunkenheimer, E. S., Shields, A. M., & Cortina, K. S. (2007). Parental emotion coaching and dismissing in family interaction. *Social Development*, *16*(2), 232–248.

Maynard, A. E. (2016). Sibling interactions. In U. P. Gielen, J. L. Roopnarine, U. P. Gielen, & J. L. Roopnarine (Eds.), *Childhood and adolescence: Cross-cultural perspectives and applications* (2nd ed., pp. 241–262). Santa Barbara, CA: Praeger/ABC-CLI.

McDowell, D. J., Kim, M., O'Neil, R., & Parke, R. D. (2002). Children's emotional regulation and social competence in middle childhood: The role of maternal and paternal interactive style. *Marriage & Family Review*, *34*(3–4), 345–364.

McElwain, N. L., Halberstadt, A. G., & Volling, B. L. (2007). Mother- and father-reported reactions to children's negative emotions: Relations to young children's emotional understanding and friendship quality. *Child Development*, *78*(5), 1407–1425. doi:10.1111/j.1467-8624.2007.01074.x

McHale, J. P., Johnson, D., & Sinclair, R. (1999). Family dynamics, preschoolers' family representations, and preschool peer relationships. *Early Education and Development*, *10*(3), 373–401. doi:10.1207/s15566935eed1003_8

Meunier, J. C., Wade, M., & Jenkins, J. M. (2012). Mothers' differential parenting and children's behavioural outcomes: Exploring the moderating role of family and social context. *Infant and Child Development*, *21*(1), 107–133. doi:10.1002/icd.763

Miller-Slough, R. L., Dunsmore, J. C., Zeman, J. L., Sanders, W. M., & Poon, J. A. (2017). Maternal and paternal reactions to child sadness predict children's psychosocial outcomes: A family-centered approach. *Social Development*. doi:10.1111/sode.12244

Minde, K. (1992). Aggression in preschoolers: Its relation to socialization. *Journal of the American Academy of Child & Adolescent Psychiatry*, *31*(5), 853–862.

Mirabile, S. P. (2014). Parents' inconsistent emotion socialization and children's socioemotional adjustment. *Journal of Applied Developmental Psychology*, *35*(5), 392–400. doi:10.1016/j.appdev.2014.06.003

Moos, R. H. (1990). Conceptual and empirical approaches to developing family-based assessment procedures: Resolving the case of the family environment scale. *Family Process*, *29*(2), 199–208.

Nelson, J. A., O'Brien, M., Blankson, A. N., Calkins, S. D., & Keane, S. P. (2009). Family stress and parental responses to children's negative emotions: Tests of the spillover, crossover, and compensatory hypotheses. *Journal of Family Psychology*, *23*(5), 671–679. doi:10.1037/a0015977

Paquette, D. (2004). Theorizing the father-child relationship: Mechanisms and developmental outcomes. *Human Development*, *47*(4), 193–219. doi:10.1159/000078723

Paquette, D., Coyl-Shepherd, D. D., & Newland, L. A. (2013). Fathers and development: New areas for exploration. *Early Child Development and Care*, *183*(6), 735–745. doi:10.1080/03004430.2012.723438

Parke, R. D., & McDowell, D. J. (1998). Toward an expanded model of emotion socialization: New people, new pathways. *Psychological Inquiry*, *9*(4), 303–307.

Perlman, M., Ross, H. S., & Garfinkel, D. A. (2009). Consistent patterns of interaction in young children's conflicts with their siblings. *International Journal of Behavioral Development*, *33*(6), 504–515. doi:10.1177/0165025409343745

Peterson, R. A. (1994). A meta-analysis of Cronbach's coefficient alpha. *Journal of Consumer Research*, *21*(2), 381–391.

Rauer, A., & Volling, B. (2013). More than one way to be happy: A typology of marital happiness. *Family Process*, *52*(3), 519–534. doi:10.1111/famp.12028

Rauer, A., & Volling, B. (2015). The role of relational spirituality in happily-married couples' observed problem solving. *Psychology of Religion and Spirituality*, *7*(3), 239–249. doi:10.1037/rel0000022

Schaefer, E. S., & Edgerton, M. (1981). *The sibling inventory of behaviour*. Chapel Hill: University of North Carolina.

Shewark, E. A., & Blandon, A. Y. (2015). Mothers' and fathers' emotion socialization and children's emotion regulation: A within-family model. *Social Development*, *24*(2), 266–284.

Song, J., Volling, B. L., Lane, J. D., & Wellman, H. M. (2016). Aggression, sibling antagonism, and theory of mind during the first year of siblinghood: A developmental cascade model. *Child Development*, *87*(4), 1250–1263. doi:10.1111/cdev.12530

Van Berkel, S. R., Groeneveld, M. G., Mesman, J., Endendijk, J. J., Hallers-Haalboom, E. T., van der Pol, L. D., & Bakermans-Kranenburg, M. J. (2015). Parental sensitivity towards toddlers and infant siblings predicting toddler sharing and compliance. *Journal of Child and Family Studies*, *24*(8), 2270–2279. doi:10.1007/s10826-014-0029-y

Volling, B. L., & Belsky, J. (1992). The contribution of mother-child and father-child relationships to the quality of sibling interaction: A longitudinal study. *Child Development*, *63*(5), 1209–1222. doi:10.2307/1131528

Volling, B. L., & Blandon, A. Y. (2005). Positive indicators of sibling relationship quality: The sibling inventory of behaviour. In K. A. Moore, L. H. Lippman, K. A. Moore, & L. H. Lippman (Eds.), *What do children need to flourish: Conceptualizing and measuring indicators of positive development* (pp. 203–219). New York, NY: Springer Science + Business Media. doi:10.1007/0-387-23823-9_13

Volling, B. L., & Elins, J. L. (1998). Family relationships and children's emotional adjustment as correlates of maternal and paternal differential treatment: A replication with toddler and preschool siblings. *Child Development*, *69*(6), 1640–1656. doi:10.2307/1132137

Volling, B. L., Mahoney, A., & Rauer, A. J. (2009). Sanctification of parenting, moral socialization, and young children's conscience development. *Psychology of Religion and Spirituality*, *1*(1), 53–68. doi:10.1037/a0014958

Wellman, H. M., Lane, J. D., LaBounty, J., & Olson, S. L. (2011). Observant, nonaggressive temperament predicts theory-of-mind development. *Developmental Science*, *14*(2), 319–326.

Zahn-Waxler, C., Radke-Yarrow, M., Wagner, E., & Chapman, M. (1992). Development of concern for others. *Developmental Psychology*, *28*(1), 126–136. doi:10.1037/0012-1649.28.1.126

Zeman, J., Penza, S., Shipman, K., & Young, G. (1997). Preschoolers as functionalists: The impact of social context on emotion regulation. *Child Study Journal*, *27*(1), 41–67.