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ABSTRACT

Given that children's exposure to gratitude-related activities may be one way that parents can socialize gratitude in their children, we examined whether parents' niche selection (i.e., tendency to choose perceived gratitude-inducing activities for their children) mediates the association between parents' reports of their own and their children's gratitude. Parent-child dyads ($N = 101$; children aged 6–9; 52% girls; 80% Caucasian; 85% mothers) participated in a laboratory visit and parents also completed a 7-day online diary regarding children's gratitude. Decomposing specific indirect effects within a structural equation model, we found that parents high in gratitude were more likely to set goals to use niche selection as a gratitude socialization strategy, and thereby more likely to place their children in gratitude-related activities. Placement in these activities, in turn, was associated with more frequent expression of gratitude in children. We describe future directions for research on parents' role in socializing gratitude in their children.

Gratitude is related to numerous adaptive outcomes in adulthood including greater life satisfaction, better health outcomes, and lower psychopathology (Wood, Froh, & Geraghty, 2010) as well as more optimal social functioning (Emmons & McCullough, 2004), positive affect and happiness (Emmons & McCullough, 2003; Froh, Kashdan, Ozimkowski, & Miller, 2009). Despite the increasingly consistent picture of gratitude as beneficial for adults, the origins of gratitude and how to best cultivate gratitude over development remains unclear. As with other prosocial emotions, parents likely play a key role in socializing gratitude in children (Froh et al., 2009).

Parents may be motivated to foster gratitude in their children through a variety of socialization strategies (Eisenberg, Cumberland, & Spinrad, 1998; Froh et al., 2009). One key way that theorists believe parents socialize children's emotional development is by selecting the types of activities and environments in which children participate (a strategy termed "niche selection"; Eisenberg, Spinrad, & Cumberland, 1998; Fredrickson, 1998; Parke & McDowell, 1998). Although identified as a potentially important mechanism through which parents could socialize positive emotions, including gratitude, empirical tests of niche selection are lacking. Thus, in the current study, we tested whether niche

selection is a socialization strategy that is associated with gratitude in children.

Defining gratitude with an eye toward development

Although gratitude in adults is differentially defined as a life orientation, attribute, virtue, mood, and emotion (Wood et al., 2010), gratitude is most often measured in studies of adults as an attribute that involves showing a sense of appreciation or thankfulness in response to the recognition of receiving something beneficial (McCullough, Emmons, & Tsang, 2002). As noted by Layous and Lyubomirsky (2014), this definition may reflect a "mature" or adult form of gratitude and early manifestations or child forms of gratitude may lack some of the consistency of an attribute-like expression as well as some of the complex cognitive and emotional structures of the adult form. Perhaps more useful for understanding the developmental emergence of gratitude, we focus on gratitude as a prosocial emotion and on instances of children's gratitude experiences rather than on gratitude as an established enduring attribute. Similar to other gratitude researchers (e.g., Nelson et al., 2013), as well as to parents who participated in focus groups we conducted about children's gratitude

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(Hussong et al., 2015), we define gratitude as a socio-emotional process that results in a sense of happiness, joy, or appreciation due to the appraisal of having received something based not on one's own efforts but on the giver's free and unrestricted intentions to give. Accordingly, like others, we view children's gratitude as having cognitive, emotional and behavioral structures (Nelson et al., 2013) but because we view these components of gratitude as emerging in middle childhood, we sought a definition and measure of children's gratitude that incorporates rather than distinguishes these components to capture the broader experience of gratitude in children.

We anticipate that parents who are high in gratitude may have children who more effectively demonstrate gratitude. Only one study has investigated the association between gratitude in adults and children. Hoy, Suldo, and Mendez (2013) found that fourth- and fifth-grade children's gratitude ratings were moderately correlated with those of their mothers but not their fathers. The authors suggest that this association may be due to mothers' socialization of a sense of appreciation in their children, but were unable to test if and how emotion socialization occurred in these families.

According to Eisenberg, Spinrad et al. (1998), parents socialize emotions in their children through a multistep process in which parents first set emotion socialization goals for their children and then engage in emotion socialization behaviors in accordance with their socialization goals. In the current study, we adopt Eisenberg's model and examine one specific gratitude socialization mechanism, namely the role of parents' niche selection, as a way to explain the association between parents' own gratitude and that of their children. Specifically, we hypothesize that parent gratitude is associated with child gratitude because parents high in gratitude are both (a) more likely to prioritize fostering gratitude as a socialization goal and (b) more likely to frequently engage in parenting practices that promote gratitude in their children. In this way, we build on work by Hoy et al. (2013) by identifying the socialization processes which link parent and child gratitude.

Parents' use of niche selection to foster gratitude

We posit that when parents select activities and environments that provide children with greater opportunities to engage in gratitude behavior, then children are more prepared to experience and express gratitude. Indeed, several school-based interventions demonstrate the potential for activity involvement to foster gratitude in children. For example, children (ages 8–19 years) low in positive affect who were randomly assigned to write and read a thank you letter reported greater gratitude and positive affect at initial post-treatment follow-up, and greater positive affect 2 months later compared to children assigned to a control group (Froh et al., 2009). Similarly, an intervention with sixth and seventh graders in randomly assigned classrooms who were instructed to list five things for which they were grateful each day for two weeks reported greater positive affect at post-test in comparison to their peers (Froh, Sefick, & Emmons, 2008). Finally, Froh et al. (2014) showed that 8–11 year old students who received five structured lessons on how cost and benefit appraisals (i.e., understanding a benefactor's intentions and costs when gift-giving) are related to gratitude reported greater understanding of benefit appraisals, thanking behavior, and gratitude ratings at one week and 5 month post-tests as compared to students in a control condition. Together these studies of gratitude interventions in children indicate that children's exposure to gratitude-related activities (instruction, letter writing, listing blessings) may indeed increase children's gratitude.

More generally, these studies provide support for the role of external agents in fostering gratitude in children and suggest that parents' perceptions that the activities in which they place their children actually promote gratitude may indeed be well-founded. However, the role of parents in prioritizing and enacting niche selection as a gratitude socialization strategy has yet to be studied. Understanding parents' role in the socialization of gratitude is important because parents are the primary emotion socialization agents in their children's lives (Eisenberg, Cumberland et al., 1998) and understanding parents' use of niche selection as a socialization strategy could build on existing work to identify points of intervention to foster child gratitude through the family. Notably, most work examining children's gratitude utilizes samples with participants ages 10 and older (Froh et al., 2011). However, theorists identify ages 7–10 as the period when gratitude may emerge in most children (Froh et al., 2011; Wood et al., 2010). Therefore, to capture the effects of parent niche selection on the earliest emerging forms of child gratitude, we investigate parent niche selection in children ages 6–9.

Predicting parental niche selection behavior

Eisenberg and colleagues posit that there are parent, cultural, and contextual influences on parent engagement in emotion socialization strategies such as niche selection (Eisenberg, Spinrad et al., 1998). Building on this framework, we explored whether, in addition to parents' own gratitude, other characteristic of parents as well as family and cultural context are associated with parents'

use of niche selection as a gratitude socialization strategy. Regarding parents' other characteristics, we hypothesized that adaptive personality attributes that correlate with gratitude in adulthood are also associated with parents' use of niche selection. These adaptive personality attributes include extroversion (i.e., a dispositional tendency to be energetic, talkative, bold, and outgoing; Saucier, 1994) agreeableness (i.e., a dispositional tendency to be cooperative, warm, and kind; Saucier, 1994), conscientiousness (i.e., a dispositional tendency to be efficient, organized, and practical; Saucier, 1994), and optimism (i.e., a dispositional tendency to hold positive expectancies for the future; McCullough et al., 2002; Scheier, Carver, & Bridges, 1994; Wood et al., 2010; Wood, Joseph, & Maltby, 2009; Wood, Maltby, Gillett, Linley, & Joseph, 2008). Together, these and other big-five personality attributes have been shown to predict between 21% and 28% of the variance in adults' reported gratitude (McCullough et al., 2002). Parents who have adaptive personality attributes may be more likely to select niche selection strategies to promote gratitude in their children because they view gratitude as part of an overall pattern of healthy social behavior.

Two factors that characterize family culture and context and that have been found to have a major impact on prosocial development are religiosity and socioeconomic status (SES). Gratitude researchers recognize that many religious teachings emphasize gratitude development (Wood, Joseph, & Linley, 2007; Wood et al., 2009). A wide variety of religious variables are associated with gratitude in adults, including placing a higher importance on religion, greater frequency of service attendance, more time spent reading scripture and praying, and a more personal relationship with God (McCullough et al., 2002). Due to its emphasis in religious teachings, child gratitude development may be more salient to parents who are religiously involved. Consequently, these parents may be more likely to select opportunities for children to engage in gratitude-related activities. On the other hand, family SES may serve as a boundary for certain forms of niche selection. No investigations have explicitly investigated the link between SES and gratitude, but several studies have examined the link between SES and the development of prosocial behaviors more generally in children. These investigations indicate that family income is positively related to youth prosocial development, even after controlling for other school, family, and neighborhood resources (Theokas & Lerner, 2006), and that youth from families with less education and lower parental incomes had lower scores on developmental outcome measures including violence avoidance, thriving (i.e., having a special talent that gives joy and energy, is an important

part of who they are, and is recognized by three or more adults), and monthly volunteering (Scales et al., 2008). Higher socioeconomic status may provide families with the security, time, and economic resources needed to engage children in a wide variety of gratitude-inducing activities. Thus, parent SES may have a direct effect on the extent to which parents engage in gratitude niche selection.

Each of these potential influences on children's gratitude may interact with parents' own gratitude to focus the values and resources of parents on fostering gratitude in particular rather than on promoting prosocial behavior more broadly. Therefore, we investigated the unique effects of parent positive personality attributes, family religious involvement, and SES on parents' use of niche selection strategies to foster children's gratitude as well as the extent to which parent gratitude moderates these associations.

The current study

We tested the role of parents' niche selection in mediating the relation between parents' and children's gratitude in a sample of 101 parent-child dyads. Specifically, we made six hypotheses. First, we expected that parents' gratitude would be positively associated with more frequent displays of gratitude in children, even after controlling for other parent characteristics (i.e., extroversion, agreeableness, conscientiousness, optimism, religious involvement, and SES) such that high levels of parents' gratitude would be associated with more frequent displays of gratitude in children. Second, we predicted that parents' gratitude would be positively associated with greater parent endorsement of niche selection as a gratitude socialization goal. Third, we predicted that greater parent endorsement of niche selection as a gratitude socialization goal would be positively associated with parents more frequently selecting gratitude-related activities for their children, even after controlling for other parenting and family characteristics (i.e., parent personality attributes, SES, and religious involvement). Fourth, we expected that more frequent parent selection of gratitude-related activities for their children would be positively associated with more frequent displays of gratitude in children even after controlling for other parenting and family characteristics. Finally, (hypothesis 5) we expected that family religious involvement, SES, and parents' positive personality attributes would be positively associated with parent endorsement of niche selection as a socialization goal and parent selection of gratitude-related activities, particularly (hypothesis 6) in parents high in gratitude.

Method

Participants

The Raising Grateful Children Project (Hussong et al., 2015) included 101 parent-child dyads recruited through mass emails to faculty, staff, and students at a large southeastern university, fliers distributed through public and private schools in first to third grade classrooms, and community postings. Recruitment fliers and consent documents informed parents that they would be completing activities and answering questions about gratitude and how children experience, express, and develop gratitude. Though parents were aware that the study was about gratitude, initial exploratory analyses revealed that parent social desirability (as measured by the Social Desirability Scale-17; Stober, 2001) was not correlated with parent reports of their own gratitude, their children's gratitude, or their use of niche selection strategies ($r = -.13$ to .03, $p = .16$ to .76 across constructs). Therefore, we do not believe knowledge of the study purpose caused parents to answer in socially desirable ways. Families with a child aged 6–9 were eligible for the study, with the exceptions of children diagnosed with serious developmental delay or parents or children with limited English fluency. Children were 52% female with a mean age of 7.4 years ($SD = 1.03$ years). Parents were predominantly female (85% mothers, 15% fathers), had a mean age of 41.0 years ($SD = 5.2$ years), and self-identified as 81% European American, 9% Asian, 5% African American, 4% Latino, 1% American Indian/Alaska Native and 1% Middle Eastern. Regarding annual income, 15% of families reported less than $50,000, whereas 63% reported $100,000 or more. In addition, less than 5% of parents had not completed a college degree and 62% had completed a masters or doctoral degree.

Procedure

Parent-child dyads completed a lab-based assessment followed by a 7-day online diary completed only by parents. During the lab visit, we obtained parent consent and child assent, administered three observational tasks to parent-child dyads (which are not described further here because they were not germane to current study goals), and asked parents to complete a computerized survey while children completed an interviewer-administered battery in a separate room. Visits lasted about 2-hours and families received $30. Online daily diaries were administered via Qualtrics beginning the day after the baseline assessment. Diaries were identical each day and took 5–10 minutes to complete. Participants received $1 for each completed diary and $3 bonus if they completed all seven diaries. Links to daily diaries were only active until midnight on the day after they were received, and participants received a reminder phone call if they had not completed diaries by 6 PM on the day they were received, to ensure that participants completed diaries daily (as opposed to all at once at the end of the 7-day period). Participant retention throughout the study was high; 89% of parents completed all 7 daily diaries and 96% completed at least 5.

Measures

Covariates and contextual predictors

Correlations among all primary study variables as well as psychometric properties are reported in Table 1.

Child gender

Parents reported their child's gender and responses were coded as 0 (female) and 1 (male).

Religious involvement

Because literature reviews suggest that few well-validated multi-item measures of religious involvement exist (Mokel & Shellman, 2013), we opted for a well-used item (e.g., Mueller, Bensyl, Vesely, Oman, & Aspy, 2010) which assesses parents' religious involvement by asking "How involved are you in religious activities?" using a scale ranging from 1 (*not involved*) to 5 (*very involved*) with high scores indicating greater involvement.

Parent socioeconomic status

We standardized and averaged five items to index SES that included parent report of: (1) approximate family income from the previous year using a thirteen-point scale ranging from 0 ($9,999 or less) to 13 ($200,000 or more); (2 and 3) educational attainment of each parent using an 8-point scale that ranged from 1 (some high school) to 8 (completed graduate or professional degree); and, (4 and 5) the MacArthur scale of subjective social status in which parents indicated their own SES relative to individuals in the United States broadly as well as the SES of their family of origin (Adler, Epel, Castellazzo, & Ickovics, 2000).

Parent personality attributes

Parents completed the agreeableness, extroversion, and conscientiousness subscales of the Big-5 Mini-Markers measure (Saucier, 1994). Each of these scales consisted of eight single word items that parents responded to by indicating how accurately each attribute described them in general, as compared to other persons they knew of the same sex and roughly the same age using a scale of 1 ("*extremely inaccurate*") to 9 ("*extremely accurate*").

Table 1. Correlations and internal reliability estimates among primary study variables.

		1	2	3	4	5	6	7	8	9	10	11
1	Child gender	n/a										
2	Parent religious involvement	.05	n/a									
3	Parent SES	−0.02	0.06	n/a								
4	Parent agreeableness	0.08	−0.08	−0.07	0.80							
5	Parent extroversion	0.12	−0.08	0.05	0.33*	0.92						
6	Parent conscientiousness	0.11	0.09	0.00	0.17	0.21*	0.86					
7	Parent optimism	0.16	−0.10	0.24*	0.18	0.34*	0.17	0.86				
8	Parent gratitude	0.07	−0.03	0.00	0.34*	0.23*	0.04	0.08	0.96			
9	Niche selection activities scale	−0.02	0.42*	0.11	0.13	0.17	0.06	0.11	0.08	0.70		
10	Niche selection goals scale	0.00	0.11	−0.11	0.26*	0.39*	0.20*	0.27*	0.29*	0.44*	n/a	
11	Child gratitude	−0.08	0.19	0.07	0.24*	0.21*	0.06	0.03	0.31*	0.41*	0.36*	0.87
	Mean	.51	2.40	0.00	7.39	5.95	6.67	3.67	6.12	0.57	0.00	0.75
	SD	−	1.46	0.72	0.83	1.68	1.20	0.75	1.31	0.18	0.94	0.37

Note. Diagonal represents Cronbach's alpha reliability estimate. *$p < .05$.

Averages of the eight items on each subscale were used to create subscale scores which indicated levels of each personality attribute with adequate to strong internal reliability (α range = .80 to .92). Examples from each subscale are as follows: agreeableness (e.g., "cooperative," "warm"), extroversion (e.g., "talkative," "bold"), and conscientiousness (e.g., "efficient," "organized").

Parent optimism

The Life Orientation Test-Revised (LOT-R) was used to assess parent self-reported optimism (Scheier et al., 1994). Parents indicated the extent to which they agreed with 10 statements related to dispositional optimism (e.g., "It's easy for me to relax," "I'm always optimistic about my future") on a scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Items were averaged to create one score, with higher scores indicating higher optimism.

Parent gratitude

We used three items from the Algoe Gratitude Questionnaire (AGQ; Algoe & Stanton, 2012) to assess parents' own gratitude. Parents reviewed their interactions during the course of the past month and focused on memorable events where others had performed favors for them, then rated how frequently they had felt different gratitude-related emotions (e.g., "Thankfulness," "Appreciation." "Gratitude") in response to these favors on a scale ranging from 0 (*Never*) to 7 (*7 or more times*).

Parent niche selection[1]

Eisenberg's model of emotion socialization suggests that for any given emotion socialization strategy, parents must first set goals to use the emotion socialization strategy, and, second, perform activities related to such

goals (Eisenberg, Spinrad et al., 1998). To capture both of these dimensions, we created two measures of parents' use of niche selection as a gratitude socialization strategy. We created the Niche Selection Goals Scale to capture the first of these dimensions (i.e., parents' niche selection goals). On the goals scale, parents rate the extent to which they select activities for their children in conjunction with 11 gratitude socialization goals (e.g., "to provide your child with opportunities to develop a sense of gratitude for other people," "to provide your child with opportunities to develop a sense of thankfulness for what has been given," "to teach your child how to express gratitude") using a five-point scale (1 = "*not at all*" to 5 = "*always*"). Specifically, we provided the following instructions to parents: "We are interested in the types of activities in which your child participates, and the reasons why your child ends up in those activities. Please use the scale below to note the extent to which you select, or encourage your child to select, activities that do the following." Items on the goals scale were developed from parents' actual reports of their goals in focus groups (Halberstadt et al., 2016).

To evaluate this goals scale, we conducted an exploratory factor analysis in SAS Version 9.3. Eigenvalues derived in a principal components analysis (PCA) revealed that a one-factor solution (eigenvalue = 4.76) was optimal, but that two-factor (eigenvalue = 1.45) and three-factor (eigenvalue = 1.08) solutions were also possible (Kaiser, 1960). We estimated one-, two-, and three-factor solutions using an oblique promax rotation for multiple factors and examined factor solutions. For the two- and three-factor solutions, item cross-loadings and factors defined by few items indicated poor model fit. In the one-factor solution, all items adequately loaded onto one factor with loadings of $\lambda > .40$. Following guidelines for simple structure (Sass & Schmitt, 2010), we retained the one-factor solution and estimated this model in a confirmatory factor analysis conducted in Mplus 7.2 (Muthén & Muthén, 2014), using a maximum likelihood estimator with robust standard

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[1]The two scales created for use in this study are available from the first author, whose correspondence information is listed on the first page of the article.

errors, following Bollen and Bauldry (2011). Evaluation of model fit was based upon recommended fit index cut-off values which indicate excellent model fit (CFI/TLI cut-off values > 0.95, RMSEA cut-off value < 0.05, SRMR cut-off value < 0.08; Schreiber, Stage, King, Nora, & Barlow, 2006).

Initial model fit with all 11 items was not acceptable (χ^2 (44) = 154.77, $p < .01$, CFI = 0.74, TLI = 0.68, RMSEA = 0.16, SRMR = 0.09). To evaluate item structure, we reviewed modification indices to identify potential local dependence (i.e., correlated residual error terms that significantly improved model fit) between item pairs. We iteratively dropped items with local dependence in each pair based on factor loadings and redundant item coverage in the item set. Three items were dropped based on these criteria in iterative runs. The resulting model fit was adequate (χ^2 (20) = 32.35, $p = .04$, CFI = 0.95, TLI = 0.93, RMSEA = 0.08, SRMR = 0.05), indicating the model was appropriate to estimate a latent variable for the goals scale. Factor loadings for the eight item indicators are shown in Table 2. We estimated this scale as a latent variable in subsequent analyses.

We created the Niche Selection Activities Scale to measure the second dimension identified by Eisenberg (i.e., parent gratitude-related activity selection; Eisenberg, Spinrad et al., 1998). The activities scale measures parent selection of their children into gratitude-related niches by providing parents with a list of 19 activities perceived to be gratitude-inducing by parents in previous focus groups (e.g., "Setting up dinners or social events with other families who show gratitude often," "Choosing a school for your child that values or teaches about the practice of gratitude," "Setting up play dates for your child with other children who value or show gratitude," "Participating in clubs or groups that engage in social service actions"). Parents indicated if their children had ever participated in each activity using a yes or no response scale. Specifically, we asked parents to "Consider whether you have selected any of the following activities for your child to participate in with at least part of the goal being that your child will develop a stronger sense of gratitude. Please select all those

activities for which this has been at least part of your goal." Development of the activities scale was guided by two sources: (a) focus group responses regarding activities in which parents intentionally placed their child to cultivate gratitude (Halberstadt et al., 2016) and (b) existing activity selection checklists that measure child prosocial behavior (e.g., Agans et al., 2014; Theokas & Lerner, 2006; Zarrett et al., 2009). Each activities scale item was endorsed by at least 25% of the sample, thus indicating the relevance of these activities for this population. We created activities scale scores by averaging across the 19 items to create a proportion score for each dyad indicating the percentage of parent-reported activities in which a child participated. This scoring procedure followed that of existing measures of youth activity participation (e.g., Theokas & Lerner, 2006; Zarrett et al., 2009). Internal validity for the activities scale ($\alpha = .70$) was similar to that of other measures of activity participation (e.g., Zarrett et al., 2009) and final scores ($M = 0.57$, $SD = 0.18$) demonstrated acceptable levels of skew and kurtosis. Additionally, both the Niche Selection Goals Scale ($r = 0.50$, $p < .01$) and the Niche Selection Activities Scale ($r = 0.25$, $p < .01$) were significantly correlated with the Parent Gratitude Behaviors Scale (Hussong et al., 2015), which measures the extent to which parents engage in gratitude socialization behaviors on a daily basis. These significant correlations provide evidence of convergent validity between the Niche Selection Goals Scale, Niche Selection Activities Scale, and another measure of parent gratitude socialization. Furthermore, both the Niche Selection Goals Scale ($r = -0.01$, $p = .91$) and Niche Selection Activities Scale ($r = -0.12$, $p = 0.12$) were not correlated with the Social Desirability Scale-17 (Stober, 2001), which we used to measure social desirability in parent answers, providing evidence of divergent validity for both of these scales.

Child gratitude

We created a measure of parent-reported daily displays of child gratitude assessed over 7 days in an online daily diary format based on our process model of gratitude (Hussong et al., 2015). Ten items captured children's gratitude as reported by parents. These items were

Table 2. Results of final confirmatory factor analysis of niche selection goals scale.

Item	Item content	Standardized factor loadings
1	Provide your child with opportunities to develop a sense of thankfulness for what your child has been given	0.73
2	Provide your child opportunities to visit places that provide services to those in need	0.49
3	Teach your child about how it feels to be grateful	0.77
4	Provide your child with opportunities to interact with a diverse group of other children	0.37
5	Provide your child with opportunities to develop a sense of gratitude for other people	0.79
6	Provide your child with opportunities to develop a sense of appreciation for what others lack	0.56
7	Teach your child to be reflective so your child can better appreciate what is around them	0.65
8	Teach your child how to express gratitude	0.74

designed to reflect awareness of being given a gift (e.g., "My child acknowledged or recognized that they received something when prompted"), making gratitude-related attributions (e.g., "My child recognized the effort or thoughtfulness behind a gift or object they received from others"), positive affect in response to a gift (e.g., "My child expressed positive feelings when they received something special"), and displaying gratitude behaviors (e.g., "My child used good manners after being given something without being prompted"). The frequency-based response scale ranged from 0 (Not at all) to 4 (11 times or more). Items were averaged within day to create daily indicators of parent-reported child gratitude ($M = .74$, $SD = .48$; $\alpha = .78$–$.89$ over days) and then across days for a cumulative indicator of children's gratitude.

Results

We tested our six predictions in a series of structural equation models conducted in MPlus Version 7.2. For all analyses, evaluation of model fit was based upon recommended fit index cut-off values which indicate excellent model fit (CFI/TLI cut-off values > 0.95, RMSEA cut-off value < 0.05, SRMR cut-off value < .08; Schreiber et al., 2006).

Association between parent and child gratitude

We first tested the association between parent gratitude and child gratitude while controlling for parent optimism, agreeableness, extroversion, conscientiousness, SES, and religious involvement as well as child gender (see Table 3, Model 1). Because this model was fully saturated, no model fit indices were available. Greater parent gratitude ($\beta = 0.25$, $p < .01$) and family religious involvement ($\beta = 0.22$, $p < .01$) were the only significant predictors of more frequent parent-reported child gratitude behavior. Greater parent gratitude was a significant predictor of more frequent parent-reported child gratitude behavior even after controlling for the effects of other parent characteristics. This finding is consistent with hypothesis 1.

Niche selection goals as a mediator of the relation between parent and child gratitude

We next tested whether parents' niche selection goals mediated the association between parent gratitude and child gratitude by regressing child gratitude on parent gratitude, goals scale scores, and parent characteristics associated with children's gratitude at $p < .10$ as identified in the previous (Model 1) analysis (i.e., parent

extroversion and religious involvement). We also regressed goals scale scores on parent gratitude, other parent characteristics (i.e., optimism, agreeableness, extroversion, conscientiousness, SES, and religious involvement) and child gender. Additionally, to test the hypothesis that parent gratitude moderated the association between parent characteristics and parent endorsement of niche selection as a gratitude socialization goal, interaction terms between each parent characteristic and parent gratitude were created and used to predict parent goals scale scores. To ensure model stability and adequate fit to the data, covariates not associated with outcomes at $p < .10$ were trimmed (see Table 3, Model 2). No interactions were associated with parent goals scale scores at $p < .10$, and consequently all interaction terms were trimmed. Thus, counter to hypothesis 6, parent gratitude did not significantly moderate any of the associations between parent characteristics and parents' goals scale scores.

The resulting model fit the data well (χ^2 (65) = 84.27, $p = 0.05$, CFI = 0.94, TLI = 0.93, RMSEA = 0.06, SRMR = 0.06; see Figure 1). Parent gratitude ($\beta = 0.23$, $p < .01$) significantly predicted parents' goals scale scores (supporting hypothesis 2). Additionally, other parenting characteristics including parent optimism ($\beta = 0.23$, $p = .02$), extroversion ($\beta = 0.32$, $p < .01$), and religious involvement ($\beta = 0.18$, $p = .03$) also significantly predicted parents' goals scale scores. Parent agreeableness, conscientiousness and SES, as well as child gender were not significant predictors of goals scale scores (See Figure 1 and Table 3, Model 2).

Importantly, higher parent goals scale scores ($\beta = 0.29$, $p < .01$), and greater parent gratitude ($\beta = 0.23$, $p < .01$) predicted more frequent parent-reported child gratitude. Indirect effects were calculated within a structural equation modeling framework in Mplus using the "MODEL INDIRECT" function. Decomposition of specific indirect effects showed that parent goals scale scores significantly mediated the effect of parent gratitude on parent-reported child gratitude ($\beta = 0.07$, $p = .05$). The model explained a significant proportion of variance in goals scale scores ($R^2 = 0.32$, $p < .01$) and child gratitude ($R^2 = 0.21$, $p < .01$).

The role of niche selection activities

We then added activities scale scores to the model to test whether parent niche selection goals predicted parent gratitude-related activity selection, which subsequently predicted child gratitude (see Table 3, Model 3 and Figure 2). Specifically, we regressed child gratitude on activities scale scores, goals scale scores, and parent gratitude. We also regressed activities scale scores on

Table 3. Results of final trimmed structural equation models for primary analyses.

	Model 1	Model 2	Model 3
Predictors of child gratitude	β (SE)	β (SE)	β (SE)
Parent gratitude	0.25 (0.09)**	0.23 (0.08)**	0.24 (0.08)**
Parent religious involvement	0.22 (0.09)**	0.16 (0.09)†	–[a]
Parent extroversion	0.15 (0.09)†	–	
Parent optimism	−0.04 (0.10)		
Parent SES	0.06 (0.09)		
Parent agreeableness	0.14 (0.09)		
Parent conscientiousness	0.00 (0.09)		
Child gender	−0.13 (0.09)		
Goals scale		0.29 (0.10)**	0.16 (0.11)
Activities scale			0.31 (0.10)**
R²	0.20 (0.06)**	0.21 (0.07)**	0.27(0.07)**
Predictors of goals scale	β (SE)	β (SE)	β (SE)
Parent gratitude		0.23 (0.07)**	0.23 (0.08)**
Parent religious involvement[a]		0.18 (0.08)*	0.17 (0.09)*
Parent extroversion[a]		0.32 (0.08)**	0.32 (0.08)**
Parent optimsim[a]		0.23 (0.10)*	0.18 (0.10)†
Parent SES[a]		−0.20 (0.10)†	–
Parent agreeableness[a]		–	
Parent conscientiousness[a]		–	
Child gender[a]		–	
R²		0.32 (0.07)**	0.28 (0.08)**
Predictors of activities scale	β (SE)	β (SE)	β (SE)
Parent gratitude			–
Parent religious involvement[a]			0.37 (0.07)**
Parent extroversion[a]			–
Parent optimism[a]			–
Parent SES[a]			–
Parent agreeableness[a]			–
Parent conscientiousness[a]			–
Child gender[a]			–
Goals scale			0.43 (.09)**
R²			0.36 (0.10)**

Note. All coefficients are standardized estimates. Blank entries indicate term was not estimated in original or trimmed final models. – = Predicted pathways estimated in original model and then trimmed for the final model because they were nonsignificant at $p < .10$ and thus trimmed from final models 2 and 3.
[a]Interactions between these predictors and child gratitude were nonsignificant at $p < .10$ and thus trimmed from final models 2 and 3.
†$p < .10$. *$p < .05$. **$p < .01$.

goals scale scores, parent characteristics including parent optimism, extroversion, agreeableness, conscientiousness, SES, religious involvement, and child gender.

Additionally, to test the hypothesis that parent gratitude moderated the association between parent characteristics and parent activity choices, interaction terms
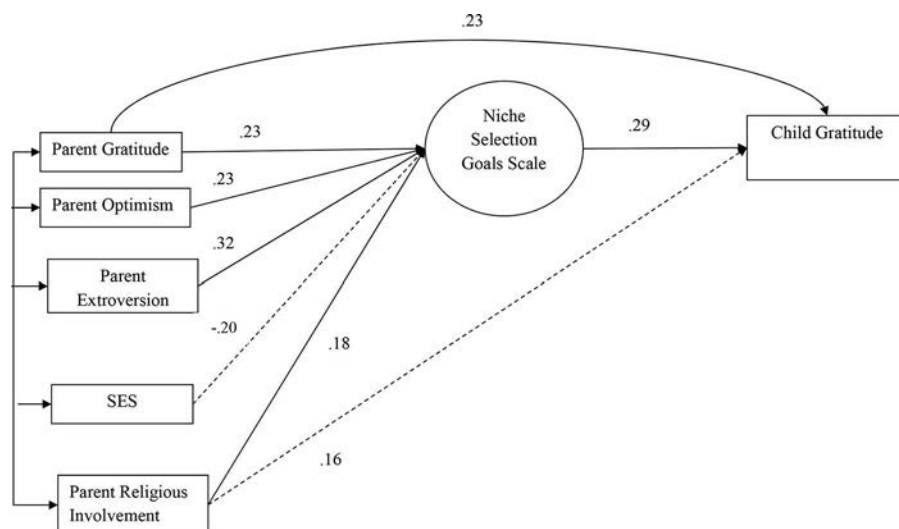

Figure 1. Structural equation model results of niche selection goals scale mediation analysis. *Note.* This path model depicts Model 2 results from Table 3. All paths significant at $p < .05$ except for those depicted by dashed lines, which are significant at $p < .10$. All other predictors that were nonsignificant at $p > .10$ were trimmed from the final model and thus not depicted here. Indicators of the Niche Selection Goals Scale latent variable are not depicted here but are reported in Table 2.

between each parent characteristic and parent gratitude were created and used to predict parent activities scale scores. To ensure model stability and adequate fit to the data, covariates not associated with outcomes at $p < .10$ were trimmed (see Table 3, Model 3). Once again, no interaction terms were significant at $p < .10$ and, consequently, all interaction terms were trimmed from the model (leaving hypothesis 6 unsupported, parent gratitude did not significantly moderate any of the associations between parent characteristics and parents' activity scale scores).

The resulting model fit the data well (χ^2 (68) = 92.18, $p = 0.03$, CFI = 0.94, TLI = 0.92, RMSEA = 0.06, SRMR = 0.06; see Figure 2). Goals scale scores significantly predicted parent scores on the activities scale ($\beta = 0.43$, $p < .01$), suggesting that parents who set goals to use niche selection to socialize gratitude were more likely to place their children into gratitude-related activities (supporting hypothesis 3). Activities scale scores significantly predicted greater parent-reported child gratitude ($\beta = 0.31$, $p < .01$), meaning that the more parent-perceived gratitude-related activities in which parents placed their children, the more frequently children demonstrated gratitude (supporting hypothesis 4). Consistent with our conceptual model, the activities scale fully mediated the relation between the goals scale and children's gratitude such that when activities scale scores were added to the model, goals scale scores were no longer significant predictors of child gratitude ($\beta = 0.16$, $p = .18$). In addition, associations between parent and parent-reported child gratitude ($\beta = 0.24$,

$p < .01$) and between parent gratitude and goals scale scores ($\beta = 0.23$, $p < .01$) continued to be significant.

Indirect effects were calculated within a structural equation modeling framework in Mplus using the "MODEL INDIRECT" function. Total indirect effects of parent gratitude on parent-reported child gratitude were significant ($\beta = 0.07$, $p = .05$). Decomposition of specific indirect effects showed that the pathway through parent goals scale scores and activities scale scores mediated the association between parent gratitude and child gratitude ($\beta = 0.03$, $p = .04$). Parents high in gratitude were more likely to set goals to use niche selection as a gratitude socialization strategy, which in turn predicted greater parent gratitude-related activity selection for their children, which in turn predicted more frequent parent-reported child gratitude. The model explained a significant proportion of variance in goals scale scores ($R^2 = 0.28$, $p < .01$), activities scale scores ($R^2 = 0.36$, $p < .01$), and child gratitude ($R^2 = 0.27$, $p < .01$).

This final model also provided a test of hypothesis 5 regarding the association between indicators of parent positive personality attributes, family religiosity, and SES as predictors of parents' niche selection goals and parent gratitude-related activity selection. This hypothesis was partially supported, as parent optimism ($\beta = 0.18$, $p = .06$), extroversion ($\beta = 0.32$, $p < .01$), and religious involvement ($\beta = 0.17$, $p = .05$) were each significant predictors of parent goals scale scores, and religious involvement was a significant predictor of activities scale scores ($\beta = 0.37$, $p = .01$). However, no
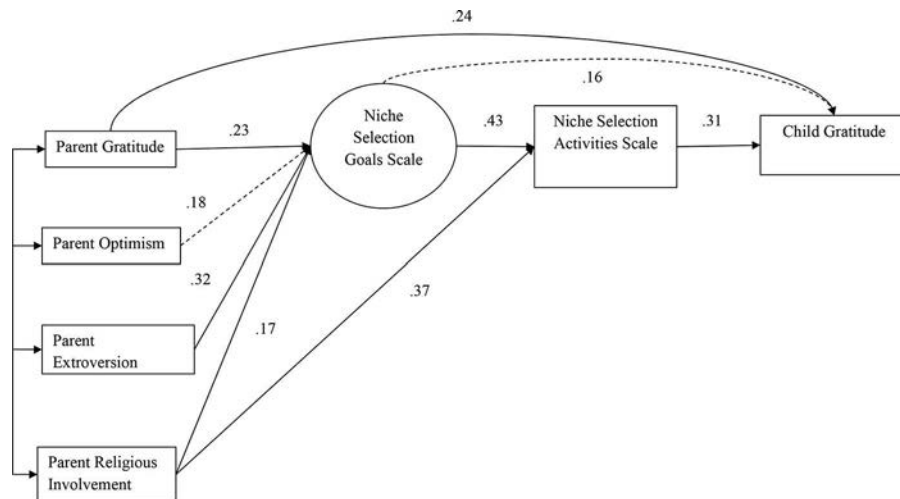

Figure 2. Results of niche selection goals and activity scale mediation analysis. *Note.* This path model depicts Model 3 results from Table 3. All paths significant at $p < .05$ except for those depicted by dashed lines, which are significant at $p < .10$. All other predictors that were nonsignificant at $p > .10$ were trimmed from the final model and not depicted here, with one exception. The path from the Niche Selection Goals Scale predicting child gratitude was kept in the model so that specific indirect effects of parent gratitude on child gratitude could be calculated. Indicators of the Niche Selection Goals Scale latent variable are not depicted here but are reported in Table 2.

other parent characteristics significantly predicted goals scale scores, activities scale scores, or child gratitude.

Discussion

Gratitude is associated with a myriad of adaptive social, mental health, and physical health outcomes in adulthood (Wood et al., 2010), yet little is known about how gratitude develops in children. Theorists have identified parents as key agents in the socialization of positive emotions in children, including gratitude. However, empirical tests of parent gratitude socialization strategies are lacking. Therefore, we investigated how parents use one unstudied socialization strategy, niche selection, to socialize gratitude in their children. Results showed that parent gratitude was significantly correlated with parent-reported child gratitude and that parents' use of niche selection partially mediated this association. Specifically, parents higher in gratitude more frequently made it a goal to use niche selection as a gratitude socialization strategy, selected more gratitude-related activities for their children, and had children who showed more frequent parent-reported gratitude. Several covariates, including parent optimism, parent extroversion, and parent religious involvement, were significantly associated with parent niche selection goals and activities. The role of parent niche selection as a potential mediating mechanism of the association between parent and child gratitude is considered in the following section.

Parent niche selection as a gratitude socialization mechanism

Eisenberg and colleagues' (Darling & Steinberg, 1993; Eisenberg, Spinrad et al., 1998) model of child emotion socialization posits that parents set emotion socialization goals concerning a specific emotion and then engage in emotion socialization practices that align with those goals, which in turn influence the development of children's experiences and expressions of that emotion. Our study was the first to apply this model of parent emotion socialization to the socialization of gratitude in children and our findings support Eisenberg's model. Parents who more frequently set niche selection goals reported that their children demonstrated more frequent gratitude; however this association was wholly mediated by parent gratitude-related activity selection for their children. Thus, it appears that not just parent socialization goals, but also parent actions in accordance with those goals, seem to be important correlates of children's gratitude. Our data support a core tenet of Eisenberg's model; namely, that parent intentions which lead to

parental action, as opposed to parent intentions alone, are an important socialization technique in the development of children's emotions, such as gratitude.

We identify two reasons why parent niche selection may be an effective gratitude socialization strategy. First, these niches may provide children with experiences that shape their understanding of giving and receiving, making positive emotional reactions to receiving and cognitive attributions about benefactors' actions that promote gratitude more likely to occur. Indeed, existing literature demonstrates that weekly interventions which increase social-cognitive appraisals of cost and benefit induced gratitude up to 5 months later in 8 to 11 year-olds (Froh et al., 2014), and that increases in child gratitude are often linked with concurrent increases in child positive affect (e.g., Froh et al., 2009). Therefore, we posit that niche selection may be an effective emotion socialization strategy because it exposes children to both cognitive and emotional precursors to gratitude behavior, and the opportunities for children to strengthen and internalize the links between these precursors and child gratitude. For example, participating in service activities for those in need may increase the likelihood that children become aware of what they have received and interpret the actions of those that give them gifts as benevolent (raising cognitive awareness and attribution), allow children to enjoy working with others to give to those in need (increasing positive affect), and permit opportunities for children to thank their parents for what their parents provide them that others do not have (behavioral expression of gratitude).

A second reason parent niche selection may be an effective gratitude socialization strategy is the potential for gratitude-related activities to provide social models of gratitude to children. Parent gratitude-related activity selection may expose children to older peers and adults who have developed a mature form of gratitude. These caregivers and older peers may model gratitude behavior during gratitude-related activities where children can observe them. Participation in gratitude-related activities alongside such social models may also allow children greater opportunity to demonstrate and be reinforced for components of gratitude learned from social models. In other words, parent niche selection may be an especially important strategy for socializing gratitude due to its provision of social models and reinforcements that allow children to learn gratitude by "seeing" and "doing" (rather than reading about or hearing about gratitude).

Though social modeling and reinforcement have not been investigated in relation to gratitude socialization, they have been identified as parent socialization mechanisms in the larger literature on child prosocial

development (e.g., McLellan & Youniss, 2003; Ottoni-Wilhelm, Estell, & Perdue, 2014). Across experimental and cross-sectional investigations, parent modeling and reinforcement of prosocial behaviors such as volunteering and giving predict greater child and adolescent volunteering and giving, even after controlling for broader parenting dimensions (e.g., warmth, support, and behavioral control) and SES (Eisenberg & Fabes, 1998; Ottoni-Wilhelm et al., 2014). Therefore, current findings and extant research suggest that parent gratitude-related activity selection socializes child gratitude because activity selection exposes children to social models who reinforce them for their demonstration of gratitude-related behaviors.

Although in need of replication and expansion, the current findings have implications for further research designed to support programs to promote children's gratitude. First, parents' frequent endorsement of niche selection as a socialization strategy suggests that they are primary change agents who are actively trying to utilize emotion socialization strategies to encourage children's gratitude development. Second, although our findings are cross-sectional, they may suggest that parent programs should focus on both goals and behavioral choices. Goal-setting to utilize niche selection was only indirectly related to children's gratitude through acting on these goals to involve children in what parents perceived as gratitude enhancing niches. Third, the breadth of activities endorsed on our Niche Selection Activities Scale included in this measure may suggest that rather than a "one size fits all" program parents may benefit from consideration of a broader array of niche selection activities that may fit with their family's needs.

Notably, even after accounting for parent niche selection goals and parent gratitude-related activity selection as well as other covariates (i.e., parent personality attributes, religious involvement, and SES), parent gratitude was still a significant predictor of parent-reported child gratitude in our final model. Thus, it appears that parent use of niche selection does not completely account for the link between parent gratitude and child gratitude. In addition to other socialization strategies, it is possible that genetic effects account for part of this persistent link. For example, Steger, Hicks, Kashdan, Kreuger, and Bouchard (2007) report that 40% of variability in gratitude scores in twins is due to genetic influence. Notably, Steger and colleagues mention that gene expression is affected by individuals' selection of, and adaptation to, their environments (Steger et al., 2007). Therefore, it is possible that transactions between parent niche selection and child genetic predispositions also inform the development of gratitude in children.

Parent characteristics as developmental assets

Parent extroversion, optimism, and religious involvement were associated with parent niche selection goals, and religious involvement was also associated with parent gratitude-related activity selection. Theories from the broader literature on youth prosocial development could provide insight into why these parent characteristics, in particular, were associated with parent niche selection. Developmental (or Ecological) Assets Theory posits that children are likely to thrive when their developmental needs are aligned with the resources in their environment (Benson, 2003; Lerner, Agans, DeSouza, & Gasca, 2013). Developmental Assets Theory suggests that adaptive environmental features make it more likely that parents will engage in socialization strategies that support child efficacy and encourage child skill-building (Theokas & Lerner, 2006). In support of Developmental Assets Theory, researchers have found that the accumulation of human resources (e.g., adaptive parent personality attributes) and institutional resources (e.g., religious involvement) make it significantly more likely that a child will engage in socialization activities (e.g., volunteering), which promote thriving behaviors throughout childhood and adolescence (Lerner, 2004; Theokas & Lerner, 2006). Parent and family characteristics examined in the current study such as extroversion, optimism, and religious involvement could be conceived of as different types of developmental assets that each uniquely affect the socialization mechanisms (e.g., niche selection) that enhance a particular youth thriving behavior (in this case gratitude).

Existing literature demonstrates that adult gratitude is part of a larger network of correlated adaptive personality attributes (Wood et al., 2010). Some of these attributes may be especially conducive to parent socialization of gratitude through niche selection. Extroverted parents may be especially likely to use niche selection as a gratitude socialization strategy because they may be more likely to select socialization strategies for their children that involve interactions with other people. Indeed, existing literature characterizes adult gratitude as strongly associated with extroversion, and researchers posit that this association exists because both personality attributes promote positive social relationships (e.g., Wood et al., 2010). Social modeling, parent-child interaction and discussion, and other socialization mechanisms embedded in the creation of gratitude-related niches for children may be especially salient to extroverted parents.

Gratitude in adults has also been associated with optimism (Wood et al., 2010). Researchers have identified both gratitude and optimism as personality attributes

which promote observation of the positive aspects of life (Wood et al., 2010). Optimistic parents may strive to engage their children in activities aligned with their optimistic outlook (e.g., service to others) that highlight for their children the positive aspects of life and the hope for a better future. These parents may seek socialization opportunities for their children characterized by activities that make the world a better place and increase positive affect. Optimistic parents may recognize that gratitude-related niches provide such experiences, and therefore utilize niche selection as a gratitude socialization strategy.

Religiously involved parents could be more likely to emphasize gratitude socialization as a goal for their children because gratitude plays a central role in many religious theologies (McCullough et al., 2002). Parents engaged in religious institutions may have more opportunities to utilize niche selection because religious institutions are perceived by many parents as settings for gratitude socialization. Indeed, previous research has demonstrated that other child prosocial behaviors (e.g., voluntary service) are associated with family membership in religious institutions that sponsor service as part of their ideological doctrine (McLellan & Youniss, 2003; Ottoni-Wilhelm et al., 2014). Similarly, behavioral enactments of gratitude are embedded in many religious experiences (e.g., prayers of thanks, attendance at religious services, reading religious texts which extol gratitude, worship of a benevolent God or Gods; McCullough et al., 2002). Therefore, a religious organization itself could serve as a gratitude-related niche, and involvement with a religious organization could also facilitate parent gratitude-related activity selection and parent modeling of gratitude. Collectively, the association of each of these parent and family characteristics with gratitude indicates that grateful parents are not the only types of parents who are likely to engage in niche selection. Moreover, the presence of other developmental assets (both human and institutional) in a family could facilitate parent use of niche selection to emphasize gratitude development in children.

Study limitations and future directions

The present study has several strengths. Though niche selection has been proposed as a parent socialization strategy in well-known theoretical work, it has not been tested empirically. This investigation was the first to identify different dimensions of parent niche selection (e.g., parent niche selection goals and parent gratitude-related activity selection) and the first to examine whether these dimensions were associated with child gratitude expressions. Additionally, the present investigation

invoked established theoretical frameworks (e.g., Eisenberg's model of emotion socialization, Developmental Assets Theory) to integrate findings with existing literature, developed reliable and valid measures of parent niche selection and child gratitude behavior, and recruited a sample to capture the developmental period (ages 6–9) during which gratitude is just beginning to emerge in children. However the present study also has limitations which suggest future directions.

First, parents endorsed gratitude-related activities on the activities scale according to their perception of whether such activities were gratitude-inducing. The extent to which these activities are actually gratitude-inducing is unknown. Though reliance on parent perception represents a study limitation, it could also potentially represent a strength of our study. It is possible that an important part of what makes a particular activity "gratitude-inducing" for children is the extent to which parents believe the activity to be gratitude-inducing, and consequently engage in behaviors and conversations with children that revolve around gratitude.

Second, the same parent reported on all measures, so there is potential for reporter bias in results that may have been confounded by parents reporting on their own gratitude as well as their children's displays of gratitude. It may well be that parents who value gratitude in themselves are more likely to attend to their child's gratitude-relevant behaviors and distort their frequency in an upward direction. In this regard, Lagattuta, Sayfan, and Bamford (2012) have found that parents' ratings of their children's emotions evidence a positivity bias when compared to children's ratings of their own emotions. While this might indeed represent a caution in interpreting parent-rated child emotions and valued behaviors, it might also be an important component of parents' enactment of their socialization goals. In relation to our findings, it may well be that that the importance of gratitude to parents increases their attention to children's grateful acts and gestures. In turn, this then permits parents to reward their children in a more timely and contingent manner when such acts and gestures occur, rendering their pursuit of socialization goals for their child more effective. Taken together, parents' use of niche selection in their children's social life and parents' importance-driven increased attention to gratitude could both be critical components of raising grateful children. Future investigations that include direct observations of parents and children participating in gratitude-related niches could eliminate concerns about reporter bias and identify the processes that make niche selection an efficacious child gratitude socialization strategy.

Third, the present study is cross-sectional, and thus we cannot establish directionality of effects in the

current model. Though we incorporated existing theory to posit directionality of niche-selection effects, it could be that parents of children who already display frequent gratitude are more likely to select their children into perceived gratitude-related activities. Similarly, children who display gratitude may actually increase parent gratitude. Therefore, caution should be used in applications of the present research in support of gratitude interventions or programming. However, it should also be noted that we attempted to further clarify directionality of our findings by testing our final mediational model depicted in Figure 2 in reverse, such that child gratitude was among the covariates that predicted niche selection goals, and parent gratitude was the dependent variable at the end of the mediational pathway encompassing child gratitude, niche selection goals, and niche selection activities. The indirect pathway from child gratitude to parent gratitude through the niche selection goals and activities scales in this alternative model was not significant ($\beta = -0.03$, $p = .15$). Therefore, though cross-sectional, these findings do provide some evidence that parent gratitude predicts use of niche selection strategies which increase child gratitude behavior, and not vice-a-versa.

Additionally, future investigations should compare the extent to which different gratitude-related activities may be differentially associated with child gratitude development. Some items included on the activities scale in the present study seem more focused on gratitude-specific socialization (e.g., "setting up play dates for your child with other children who value or show gratitude often," "setting up dinners or social events with other families who value or show gratitude often," "choosing a school for your child that values or teaches about the practice of gratitude"), whereas others focus on activities which could socialize a number of prosocial behaviors, including gratitude (e.g., "choosing a school for your child that values or teaches about social justice," "choosing a home in a diverse neighborhood," "having your child take moments to observe nature"). It is possible that selection into some of these activities results in faster or greater child gratitude development than others. Furthermore, it is also likely that some gratitude-related activities are more effective than others in socializing specific cognitive, affective, and behavioral aspects of gratitude. Future examination of which activities are optimal for socializing particular gratitude components would add specificity to our understanding of how niche selection socializes gratitude in children.

Future work could also examine the effects of other parent socialization strategies on child gratitude. Niche selection is one of several parent emotion socialization strategies posited by Eisenberg, Spinrad et al. (1998).

Other socialization strategies, including parent-child discussions about gratitude, parent-child reminiscing about past gratitude-related events, and parent reactions to children's gratitude could also affect child gratitude development (Hussong et al., 2015). Measurement of these socialization strategies in conjunction with niche selection could explain additional variance in child gratitude behavior and capture how parents utilize multiple strategies together to meet their socialization goals.

Though much work remains to be done, the present study represents an exciting first step in conceptualizing children's acquisition of gratitude as a developmental process, and in considering the role of parents in that process. This study provides preliminary evidence that parents' attempts at gratitude socialization do matter. Indeed, parents who select niches they perceive as gratitude-inducing for their children report more frequent displays of gratitude in their children. Efficacious socialization of gratitude in children has important implications for health and prosocial development across ontogeny, as gratitude is associated with social competence (Emmons & McCullough, 2004), greater life satisfaction and well-being (Froh et al., 2009; Wood et al., 2010), and less physical health problems and psychopathology (Wood et al., 2010) in adulthood. Continued investigation of niche selection and other gratitude socialization mechanisms will provide new insights into the development of prosocial and flourishing behaviors throughout childhood and beyond.

Funding

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