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## Marital Satisfaction, Family Emotional Expressiveness, Home Learning Environments, and Children's Emergent Literacy

*The current study investigates associations among marital satisfaction, family emotional expressiveness, the home learning environment, and preschool-aged children's emergent literacy skills among 385 Midwestern mothers and their children. Path analyses examined how marital satisfaction related to emotional expressiveness in the home and whether this path was associated with the home learning environment and children's literacy skills. Higher maternal satisfaction was associated with higher levels of positive and lower levels of negative family emotional expressiveness. Additionally, family emotional environments characterized by mothers with higher positive expression were related to better home learning environments, which in turn were associated with higher literacy skills in children. Study findings underscore the importance of marital and family processes when considering young children's academic development.*

The marital relationship is viewed as the relational center of the family (Davies, Sturge-Apple, Woitach, & Cummings, 2009)

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and has long been considered to play a crucial role in the emotional and relational structure of the family as a whole (Amato & Cheadle, 2008; Feldman, Wentzel, Weinberger, & Munson, 1990). As such, the quality of the marital relationship has significant implications for the overall family emotional environment (Stocker, Ahmed, & Stall, 1997; Waldinger, Schulz, Hauser, Allen, & Crowell, 2004), parent-child interactions (Davies et al., 2009; Gerard, Krishnakumar, & Buehler, 2006), and socioemotional and behavioral outcomes for children (Feldman et al.; Gerard et al.). Although there is a plethora of evidence indicating that marital quality is important for children's emotional and behavioral development (Cummings & Davies, 1996; Fosco & Grych, 2007), research investigating the influence of marital relationship quality on children's early academic and cognitive development is limited (Belsky & Fearon, 2004). In addition, relatively little is known about how the quality of the marital relationship influences the home learning environment (HLE), which includes aspects of parenting that are specifically related to early educational outcomes (Sénéchal, 2006; Sénéchal & LeFevre, 2002; Whitehurst & Lonigan, 1998), such as shared reading, playing number games, and teaching the names of letters (Buehler & Gerard, 2002).

Family systems and human ecological theories indicate that individuals are influenced by the various systems in which they are embedded (Bronfenbrenner & Morris, 1998; von Bertalanffy, 1976). Research in this area

suggests that emotions and affect spill over from the marital relationship into other family systems (Krishnakumar & Buehler, 2000). Most studies on the relationship between marriage and academic outcomes in children, however, have focused on differences between children from divorced or single-parent homes and children from homes with parents married to each other. These studies have shown that divorce affects academic outcomes in children (Amato, 2010; Potter, 2010), in that children do better overall in two-parent families that are stable over time (Brown, 2010). One study showed that both adolescent boys and girls whose parents divorced performed less well academically in the 2 years prior to the actual divorce than their peers whose parents did not divorce (Sun & Li, 2001). This suggests that family disruption affects child academic achievements, but relatively little is known about how marital quality affects child academic achievements in families that are currently intact. In addition, the majority of studies rely exclusively on measures of broad academic functioning (Sun & Li), student grades (Ghazarian & Buehler, 2010), or teacher reports of academic functioning (Bascoe, Davies, Sturge-Apple, & Cummings, 2009) rather than individual assessments of children's specific skill sets. Research consistently shows that teacher ratings of academic performance are only moderately related to children's actual academic skills (Feinberg & Shapiro, 2003).

Furthermore, most studies focus on school-age and adolescent children rather than younger children. There is limited research regarding familial processes that are related to established antecedents to academic ability, such as emergent literacy skills. Numerous studies demonstrate that trajectories of reading development are largely determined in preschool; individual differences are remarkably stable and difficult to change (Catts, Bridges, Little, & Tomblin, 2008; Skibbe, Grimm, et al., 2008). That is, children's emergent literacy skills predict future reading development (National Early Literacy Panel, 2008; Sénéchal, 2006; Storch & Whitehurst, 2002), performance in elementary school (Denton, West, & Walston, 2003; Duncan et al., 2007) and young adulthood (Baydar, Brooks-Gunn, & Furstenberg, 1993; Cunningham & Stanovich, 1997), and is even predictive of career and economic potential (Storch & Whitehurst). In the current study, our focus on preschool-aged children illuminates

some of the many factors that are associated with emergent literacy acquisition. This is an innovative initial step in further understanding the link between children's early familial experiences and their later academic outcomes.

Research indicates that the sensitivity of mother-child interactions (Hubbs-Tait, McDonald-Culp, Culp, & Miller, 2002; Skibbe, Moody, Justice, & McGinty, 2010), as well as the activities that mothers choose to do with their children (Skibbe, Justice, Zucker, & McGinty, 2008; Storch & Whitehurst, 2002), are of critical importance for explaining the acquisition of emergent literacy skills. Regarding marital satisfaction specifically, research indicates that mothers who are more satisfied with their marriages have adolescents with better academic achievement (Feldman et al., 1990). Belsky and Fearon (2004) found that, in early childhood, child performance on assessments of language development, math skills, and cognitive functioning in first grade was associated with both marital quality and parenting quality. These findings suggest that both the marital and parental subsystems are important to children's early development across several domains. We add to this literature by examining how the marital relationship is associated with the emotional environment of the home and how the quality of this emotional climate in turn is related to parenting practices in the HLE and ultimately learning outcomes in children.

#### THE MARITAL RELATIONSHIP AND THE FAMILY EMOTIONAL ENVIRONMENT, THE HOME LEARNING ENVIRONMENT, AND EMERGING LITERACY SKILLS

The emotional climate of the family is considered an essential component in explaining how marital distress influences developmental outcomes for children in general (Grych & Fincham, 1990). Levels of family emotional expressiveness, defined as the principal pattern of displaying verbal and nonverbal expressions of emotion within the family as a whole (Halberstadt, Cassidy, Stifter, Parke, & Fox, 1995), are influenced by the marital relationship. Specifically, marital satisfaction is consistently linked to emotional expressiveness in the family (Stocker et al., 1997; Waldinger et al., 2004), such that higher levels of marital satisfaction are related to higher levels of positive expressiveness in the family (Halberstadt et al.; Kolak

& Volling, 2007). In addition, higher levels of negative emotional expressiveness characterize relationships that are high in marital conflict (Wong, McElwain, & Halberstadt, 2009) and low in marital satisfaction (Halberstadt et al.; Kolak & Volling). But conflict is only one context in which expressiveness occurs in families; this study examines family emotional expressiveness across a continuum of family and marital contexts. This leads to our first study hypothesis: Higher marital satisfaction predicts higher levels of positive expressivity and lower levels of negative emotional expressivity in the family.

In the present study, we propose that the quality of the family emotional environment is associated with the ways that mothers interact with their children. Research suggests that parents who frequently exhibit negative emotional expressiveness are able to dedicate fewer resources to parenting (Dix, 1991). In addition, marriages high in conflict, which tend to have higher levels of negative emotional expressiveness, are characterized by reduced parent involvement, including less time engaging in play, shared reading, and social activities with their child (Buehler & Gerard, 2002), all of which are examples of parenting specifically related to encouraging academic development. The link between negative expressivity and parenting practices specifically related to improving children's academic skills (i.e., the HLE) has yet to be examined in the literature, but when considered together, findings from previous research suggest that negative expressiveness should be inversely related to mothers' HLE activities.

Although relations between positive expressiveness and the HLE are even less clear, it is well established that a secure emotional relationship with a primary caregiver fosters development across many domains, including aspects of cognitive and social development (Matas, Arend, & Sroufe, 1978; Main, 1983; Rothbaum, Rosen, Pott, & Beatty, 1995). Additionally, there is evidence in the literature that the affective quality of HLE activities plays an important role in the overall quality of the HLE and has a direct influence on children's emergent reading abilities (Bingham, 2007). This research suggests that positive expressions and interactions play a role in children's academic development, but the pathway through which mothers' positive expressiveness is related to children's academic skills has not been explicitly examined. This

leads to our second hypothesis: Mothers who report higher levels of positive expressiveness in the family provide more home learning activities to their children whereas mothers who report higher levels of negative expressiveness in the family provide fewer home learning activities to their children.

The academic activities that parents engage in with their children at home predict children's emergent literacy skills (Epstein, 2001; Hindman, Connor, Jewkes, & Morrison, 2008; Storch & Whitehurst, 2002). For example, shared book reading (Sénéchal, 2006), informal teaching of letters and sounds, as well as writing activities (Hindman et al.; Justice & Ezell, 2000, 2002) all promote children's early literacy development. Our third hypothesis seeks to confirm findings from previous work that the HLE is predictive of children's emergent literacy skills.

Finally, the current study examines the steps through which mothers' marital satisfaction may be associated with children's emergent literacy skills. Although there is research to suggest that the quality of the marital relationship and parenting influences children's academic outcomes (Belsky & Fearon, 2004), this study makes a significant contribution to the literature by exploring the possible pathways through which this occurs. Building on existing literature, we hypothesize that mothers' marital satisfaction is significantly associated with levels of both positive and negative family emotional expressiveness, which in turn relates to mothers' home learning activities, which is then associated with gains in children's emergent literacy skills. Addressing these specific aspects of the family environment and their associations with children's emergent literacy skills adds to our collective knowledge about important interrelations between family systems and child development.

In sum, the current study examines the individual steps in the path connecting mothers' marital satisfaction and children's early literacy skills. In the first step in this path, we hypothesize that higher levels of maternal satisfaction are associated with more positive expressivity and less negative expressivity. In the second step, we hypothesize that higher levels of reported positive expressivity and lower levels of reported negative expressivity are associated with more reported home learning activities. In the third step, we hypothesize that the positive relationship between the HLE and children's emergent literacy skills previously established

in the literature is further confirmed in this sample. Finally, we hypothesize that there is an indirect effect of maternal marital satisfaction on children's emergent literacy skills via the emotional context of the family and home learning practices.

## METHOD

### *Participants*

Participants included 429 mothers of two-parent families with children who attended one of three preschools associated with a large, Midwestern university and who were enrolled in an ongoing, multisite study on children's academic and socioemotional development. Mothers were not compensated for their participation. Mothers who reported their marital status as "single" ( $n = 26$ ) or "divorced" ( $n = 18$ ) were excluded from the study, for a final sample size of 385. Forty-six percent of the children were male, and their ages ranged from 32 to 64 months, with an average age of 49.25 months ( $SD = 6.47$ ). Children in this sample were predominately White (84%), followed by Asian or Pacific Islander (9.9%), Hispanic or Latino (2.2%), Black or African American (1.9%), and Native American (0.3%). Additionally, 1% of mothers described their child's race or ethnicity as multiracial and only 0.3% indicated "Other." When compared to census data for the counties in which these data were collected, African Americans (9%–11%) and Hispanic or Latino (7%–9%) individuals were underrepresented, although Asian or Pacific Islander were overrepresented (2%–5%; U.S. Census Bureau, 2011). The majority spoke English as their first language (93%). Other primary languages spoken in the home included Middle Eastern and South Asian languages (including Arabic, Pashto, Persian, Tamil, Konkani, Hindi, & Urdu; 2.5%), Chinese (1.4%), Korean (1.4%), Spanish (1.1%), and Japanese (0.3%). This is reflective of census data, which indicate that approximately 10% of families speak a language other than English in the counties where these sample data were collected. Similar to methodologies used in previous research (e.g., see Génereux, Auger, Goneau, & Daniel, 2008), maternal education was used to approximate each family's SES. Mothers were generally well educated, with 59% having attained a bachelor's degree or higher; 9%

reported having obtained a two-year degree, 19% reported having some college, 7% reported having technical training beyond a high school diploma, and 6% reported having a high school diploma or equivalent. Mothers in our sample were better educated than the average person in the counties of data collection. In these counties 88%–91% of persons over 25 had graduated from high school and 29%–35% had a bachelor's degree or higher.

### *Procedures*

Data for this project were collected in two phases. In the fall of 2009 and 2010, all families associated with three preschools were invited to participate in the current study ( $N = 810$ ). Mothers who consented ( $n = 571$ ) were mailed a series of questionnaires that assessed their marital satisfaction, their perceptions of emotional expressiveness at the family level, and their behaviors related to the HLE that they provided to children. Seventy-five percent of mothers returned the questionnaires requested via mail. An independent samples  $t$  test indicated that there were no significant differences between the literacy scores of children whose mothers returned the questionnaires ( $M = 332.38$ ,  $SD = 30.36$ ) and those who did not ( $M = 328.76$ ,  $SD = 28.76$ );  $t(348) = -0.94$ ,  $p = .35$ . Children's emergent literacy skills were assessed individually in children's classrooms by trained research assistants.

### *Measures*

*Marital satisfaction.* Marital satisfaction was measured using the Kansas Marital Satisfaction Scale (KMS; Schumm et al., 1986), a short, three-item measure of marital satisfaction that assesses satisfaction with a person's spouse, marriage, and marital relationship. Mothers were asked to rate their satisfaction on a 7-point Likert scale on the following questions: "How satisfied are you with your marriage?" "How satisfied are you with your husband as a spouse?" and "How satisfied are you with your relationship with your husband?" This brief measure is commonly used and has good internal consistency (Grover, Paff-Bergen, Russell, & Schumm, 1984), criterion validity (Schumm et al., 1986), construct validity (Schumm, Crock, Likani, Akagi, & Bosch, 2008; Schumm et al., 1986), and test–retest reliability (Mitchell,

Newell, & Schumm, 1983). The KMS has strong correlations with longer measures of marital satisfaction and dyadic adjustment (Crane, Middleton, & Bean, 2000; Schumm et al., 1986) and successfully discriminates between distressed and nondistressed couples (Crane et al.; White, Stahmann, & Furrow, 1994). Additionally, a recent meta-analysis identified the KMS as the best available brief measure of marital satisfaction (J. M. Graham, Diebels, & Barnow, 2011). The overall marital satisfaction score was generated for mothers by averaging the three responses on the KMS. Cronbach's alpha reliability in the current sample was .98.

*Family emotional expressiveness.* Mothers also completed the Family Expressiveness Questionnaire—Short Form (FEQ; Halberstadt, 1996). The FEQ is a 24-item questionnaire that assesses the frequency of emotional expression in the family on a scale ranging from 1 to 9. The FEQ contains two subscales of 12 items each, consisting of positive family expressiveness and negative family expressiveness subscales. Examples of positive family expressiveness include “praising someone for good work” and “expressing excitement over one's future plans,” whereas examples of negative family expressiveness include “showing contempt for another's actions” and “expressing dissatisfaction with someone else's behavior.” The FEQ has good discriminant validity and has a 10-day test–retest reliability ranging from .89 to .92 (Halberstadt). Cronbach's alpha reliability of the positive and negative expressivity subscales in the current sample were .89 and .88, respectively.

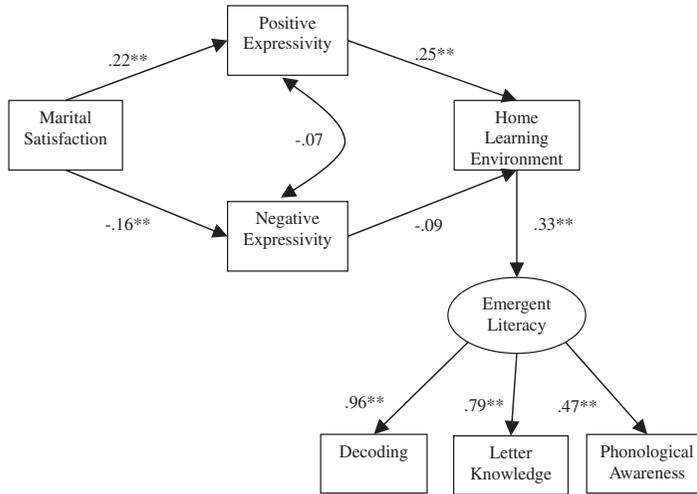
*Home learning environment.* The HLE was measured using mothers' responses on a subscale of the Parenting Questionnaire (Morrison & Cooney, 2002), which is a self-report measure of parenting behaviors. Morrison and Cooney found that, in an ethnically and socioeconomically diverse sample, a group of 50 parenting practices reliably loaded on to several distinct factors, including the HLE, warmth/support, and management/discipline, forming the three subscales of the Parenting Questionnaire. The HLE subscale directly predicts children's literacy skills in general (Morrison & Cooney), and letter knowledge and decoding specifically (Hindman & Morrison, in press). The HLE subscale includes seven items: four items related

to literacy (e.g., frequency of teaching letter names and sounds) and three items related to math (e.g., providing math workbooks and playing math-related activities). Mothers were asked to rate, on a scale from 1 to 5, how likely they were to engage in these activities at home. Scores on the seven items were summed to create a total HLE score. Higher scores indicated that mothers provided more learning activities within their homes. For a list of the questions contained in the HLE subscale of this measure, please see Appendix A. Cronbach's alpha reliability of the HLE subscale in the current sample was .84.

*Emergent literacy skills.* Three aspects of children's emergent literacy skills—letter knowledge, decoding, and phonological awareness—were assessed and used to create an emergent literacy skills factor. Decoding was assessed using the Letter–Word Identification subtest of the Woodcock–Johnson III Tests of Achievement (WJ III; Woodcock, McGrew, & Mather, 2001), which evaluates children's knowledge of letters, early word recognition, and decoding skills. This measure contains 76 items, but testing is complete when the subject has answered 6 consecutive questions incorrectly. Reliability for this assessment for children ages 3 to 8 ranges from .96 to .99 (Woodcock, McGrew, Schrank, & Mather, 2001, 2007). Children's letter knowledge skills were assessed using a commonly used alphabet letter identification task (Carroll, 2004; Skibbe, Connor, Morrison, & Jewkes, 2011). In this task, children are shown 26 randomly ordered uppercase alphabet letter flashcards, one at a time, and asked to name the letter. The score on the task was the number of uppercase letters named correctly and Cronbach's alpha reliability in the current sample was .97. Phonological awareness was measured using the phonological awareness subscale of the Test of Preschool Early Literacy (TOPEL; Lonigan, Wagner, Torgesen, & Rashotte, 2007). The phonological awareness subscale assesses children's blending and elision skills. Test–retest reliability for this assessment is .83 and the internal consistency for children ages 3 to 5 ranges from 0.86 to 0.88.

#### *Analysis Plan*

We used a path analysis approach within structural equation modeling to examine each of the three research questions individually

FIGURE 1. PATH DIAGRAM FOR THE MODEL ( $N = 385$ ).

as well as simultaneously within a single model. Path analysis is ideal for highlighting the direct and indirect relations between a complex set of variables. In this study, our goal is to delineate individual steps that distally connect an independent variable, maternal marital satisfaction, and a dependent variable, children's emergent literacy skills. Because we are not concerned with the reduction of a total effect by inclusion of intermediary variables, we do not examine mediation specifically, but rather focus on indirect effects.

The model presented in Figure 1 incorporates relations from mothers' marital satisfaction to levels of expressivity in the home, from expressivity to HLE, and from HLE to children's emergent literacy skills. We also include a residual correlation between positive and negative expressivity. We first describe results for each individual relation. We then consider the model as a whole, examining overall fit and indirect relations of marital satisfaction to emergent literacy skills through expressivity and HLE. Model fit was examined using the chi-square test, the comparative fit index (CFI), the Tucker-Lewis Index (TLI) and root mean square error of approximation (RMSEA) in accordance with the guidelines put forth by Browne and Cudeck (1993) and Hu and Bentler (1998). Indirect effects were examined using the multivariate generalization of the Sobel (1982) test implemented in Mplus. All analyses

were completed in Mplus (Muthén & Muthén, 2010).

Missing data were adjusted for using the likelihood-based approach to missing data implemented in Mplus. Two measures (Letter-Word Identification and the TOPEL) had missing data rates above 20% due to lack of testing time during the data collection window at one of the preschools, and this missingness was considered missing completely at random (MCAR; see Enders, 2010 for an explanation of missing data mechanisms). The remaining variables had missing data rates under 12%. From among many demographic variables considered, only maternal education consistently predicted missingness. We therefore included maternal education as an auxiliary variable with a saturated correlates approach (J. W. Graham, 2003). This yielded no change in the conclusions and negligible changes in parameter estimates (all changes less than .002 in a standardized metric). We therefore report results without the auxiliary variable.

Also, we performed additional analyses controlling for both child gender and maternal education, our measure of socioeconomic status. Gender was not significantly related to any of the study variables, nor did its inclusion in the model alter results in any substantive ways. Although maternal education was correlated with the HLE, decoding, and phonological awareness, its inclusion also did not alter results.

Because including child gender and maternal education in the model did not improve the overall fit of the model, nor did their inclusion alter the pattern of results, they were removed for the purposes of parsimony.

RESULTS

The means, standard deviations, and correlations among the study variables are presented in Table 1. The unstandardized and standardized loadings and regression coefficients for the model are presented in Table 2.

*Marital Satisfaction and Family Emotional Expressiveness*

Our first hypothesis stated that maternal ratings of marital satisfaction would predict levels of family emotional expressiveness in the home. In support of this hypothesis, results show that marital satisfaction significantly predicted both positive family emotional expressiveness ( $\beta = .22, p < .001$ ) and negative family emotional expressiveness ( $\beta = -.16, p = .00$ ). These results suggest that a higher value of a mother's marital satisfaction is associated with more positive family emotional expressivity as

reported by mothers and less negative family emotional expressivity as reported by mothers.

*Family Emotional Expressiveness and the HLE*

The second hypothesis stated that higher levels of positive expressiveness in the family would predict more home learning activities, whereas higher levels of negative expressiveness in the family would predict fewer home learning activities. Results indicate that positive family emotional expressiveness predicted the HLE ( $\beta = .25, p < .00$ ), whereas negative family emotional expressiveness did not ( $\beta = -.09, p = .10$ ). These results suggest that a higher value of a mother's positive expressivity is associated with more maternal HLE activities.

*The HLE and Emergent Literacy Skills*

For the emergent literacy factor, all three indicators had strong loadings (decoding: .96,  $p < .001$ ; phonological awareness: .47,  $p < .001$ ; letter knowledge: .79,  $p < .001$ ). In support of our third hypothesis, and consistent with the literature, the HLE predicted the children's emergent literacy skills factor ( $\beta = .33, p < .001$ ), with higher reports of home learning

Table 1. Means, Standard Deviations, and Intercorrelations of Study Variables (N = 385)

Variables	M	SD	1	2	3	4	5	6	7
Marital satisfaction	5.92	1.41	—						
Positive expressiveness	7.61	0.94	.22**	—					
Negative expressiveness	3.62	1.13	-.16**	-.11*	—				
Home learning environment	3.40	0.83	.03	.26**	-.11*	—			
Decoding	332.18	30.29	.03	-.02	-.04	.32**	—		
Letter knowledge	12.18	9.87	-.06	-.01	-.03	.32**	.75**	—	
Phonological awareness	12.49	6.74	.09	.06	-.09	.05	.47**	.31**	—

Note. \* $p < .05$ . \*\* $p < .01$ .

Table 2. Unstandardized, Standardized, and Significance Levels for the Model in Figure 1 (N = 385)

Pathways	Unstandardized	SE	Standardized	p
Maternal satisfaction → Positive expressivity	0.14	0.04	.22	.00
Maternal satisfaction → Negative expressivity	-0.13	0.04	-.16	.00
Positive expressivity → HLE	0.23	0.05	.25	.00
Negative expressivity → HLE	-0.06	0.04	-.09	.10
HLE → Emergent literacy	11.09	1.96	.33	.00
Emergent literacy → Decoding	1.00	0.00	.96	.00
Emergent literacy → Letter knowledge	0.278	0.03	.79	.00
Emergent literacy → Phonological awareness	0.11	0.02	.47	.00

Note.  $\chi^2(12) = 27.0$ . CFI = .95. TLI = .92. RMSEA = .06.

activities associated with higher levels of literacy achievement.

#### *Overall Model*

Overall, the model provided an adequate fit to the data ( $\chi^2 = 27.0$ ,  $df = 12$ ,  $p = .01$ ; CFI = .95; TLI = .92; RMSEA = 0.06). Modification indices indicated that the largest bivariate misfit was associated with the correlation between the uniquenesses for phonological awareness and letter–word identification. The addition of this correlation had a significant but small effect on fit ( $\chi^2 = 5.3$ ,  $df = 1$ ,  $p = .02$ ; CFI = .97; TLI = .94, RMSEA = .05), but cannot be theoretically justified (letter–word identification and letter knowledge are much more closely aligned theoretically). We therefore conclude that the model in Figure 1 provided an acceptable representation of the relations between the variables.

We then examined the indirect effects in the model using the multivariate generalization of the Sobel (1982) test implemented in Mplus. All indirect effects through positive expressivity were significant. The indirect effect of maternal satisfaction on the HLE through positive expressivity was significant and positive ( $\beta = .07$ ,  $p = .00$ ). Additionally, the indirect effect of positive expressivity on emergent literacy skills was significant and positive ( $\beta = .08$ ,  $p < .001$ ). Finally the total indirect effect of marital satisfaction on children's emergent literacy skills, through positive expressivity and HLE, was significant and positive ( $\beta = .02$ ,  $p = .01$ ). We note that the standardized indirect effects reflect products of direct effects, so the magnitudes are expected to be small, reflecting an important pathway relating a child's family environment to the distal outcome of emergent literacy skills. As a final consideration, we examined direct effects of maternal marital satisfaction on the HLE and emergent literacy and direct effects of positive and negative expressivity on emergent literacy. Including these four paths did not significantly improve fit ( $\chi^2 = 6.0$ ,  $df = 4$ ,  $p = .20$ ).

#### DISCUSSION

The present study expands previous work by identifying significant indirect paths from marital satisfaction to children's emergent literacy skills through family emotional environment and the HLE. We expected that mothers' marital

satisfaction would be associated with appraisals of family emotional expressiveness, and this hypothesis was fully supported in our study in that mothers' marital satisfaction was associated with both positive and negative family emotional expressivity. Our other hypotheses, that the family emotional environment would be related to the HLE, which would in turn be associated with children's emergent literacy skills, were partially supported. Increased levels of positive family emotional expressiveness were associated with increased HLE activities, but changes in negative emotional expressiveness were not significantly associated with changes in the HLE. Perhaps most importantly, the present study indicated that the overall marital and emotional environment of the family may be associated with children's emergent literacy skills through the provision of the broader emotional context wherein home learning activities occur. These findings identify a pathway through which the marital relationship is indirectly associated with young children's emergent literacy skills.

Marriages higher in satisfaction were likely to have higher levels of positive expressiveness and lower levels of negative expressiveness, which is consistent with previous research in this area (Halberstadt et al., 1995; Kolak & Volling, 2007; Krishnakumar & Buehler, 2000; Stocker et al., 1997). This finding supports the idea that the quality of the marriage is an important factor influencing the emotional climate of the family, which is related to other aspects of family functioning (Davies et al., 2009; Dix, 1991), and indicates that these relations may extend to the home learning environment that mothers provide to their children.

Higher levels of positive expressiveness predicted higher scores on maternal reports of the HLE. The current study extends previous work to highlight the importance of the broader emotional environment of the family on the HLE, in addition to the emotional quality of individual learning activities (e.g., Bingham, 2007; Hubbs-Tait et al., 2002; Skibbe et al., 2010). This finding provides further support that positive affect fosters learning and suggests that these processes extend to the larger emotional context of the family, not simply the affective quality of specific home learning activities. Although some research indicates that the family emotional environment has direct implications for children's social outcomes (Halpern, 2004;

Ramsden & Hubbard, 2002), this study is among the first to demonstrate that the family emotional environment may also relate to children's emergent literacy skills through its association with the HLE.

The finding that negative family emotional expressiveness is not significantly associated with the HLE can be interpreted in a number of ways. Although there is research to suggest that high-conflict marriages are characterized by decreased parental involvement (Buehler & Gerard, 2002) and that negative expressivity might also be associated with reduced parental resources (Dix, 1991), the link between negative expressiveness and parenting practices specifically related to improving children's academic skills (e.g., the HLE) is not well established in the literature. Some research suggests that mothers are skilled at preventing the spillover of negative affect from one family system to the other (Cummings, Goeke-Morey, Raymond, & Lamb, 2004; Doherty, Kouneski, & Erickson, 1998), which may explain why mothers' reports of negative family emotional expressiveness were not significantly related to mothers' HLE activities. Finally, mothers in the current sample report relatively low levels of negative expressivity; it is possible that this relationship might emerge in a sample with more variability in levels of negative expressivity.

Consistent with the extant literature, higher scores on the HLE predict higher literacy scores (Skibbe, Justice, et al., 2008; Storch & Whitehurst, 2002). In this sense, the learning environment in the family directly affects learning outcomes for children. This study extends previous findings by indicating that, although parenting practices specifically related to learning are important for children's academic development, these practices may reflect broader aspects of the home environment. These findings suggest that the emotional climate of the family is associated with children's academic outcomes through its effect on learning conditions within the family. One possible explanation for this can be taken from attachment theory, which indicates that secure emotional relationships with caregivers foster cognitive development (Matas et al., 1978; Rothbaum et al., 1995). It may be that children experiencing warm, emotional family environments are better able to internalize knowledge gained through home learning activities and demonstrate that knowledge in other contexts.

Finally, these results indicate that the quality of the marital relationship is indirectly associated with the familial processes that are linked to children's emergent literacy skills. Though associations between marital quality and children's psychosocial development are well established in the literature (Davies & Cummings, 1994), associations between the marital relationship and academic outcomes for young children have gone largely unexamined in early childhood (Belsky & Fearon, 2004; Feldman et al., 1990). These results suggest an indirect effect via the emotional context of the family and home learning practices. These findings correspond well with the existing literature indicating that the quality of the marital relationship is associated with the emotional resources available for parenting practices (Dix, 1991). More specifically, this study indicates that marital satisfaction is indirectly related to children's emergent literacy skills through a series of three steps: (a) marriages high in maternal marital satisfaction generally have higher levels of positive emotional expressiveness; (b) higher levels of positive emotional expressiveness are associated with increases in the number of HLE activities mothers provide; and (c) an increase in the number of HLE practices has positive implications for children's emergent literacy skills.

### *Limitations*

Interpretation of these results must be considered in light of several limitations. First, our sample included mothers who were predominantly well educated, exhibited high marital satisfaction, and chose to enroll their child in a preschool associated with a university. Home learning processes may be qualitatively different for families exhibiting more risk factors related to children's achievement (e.g., low maternal education, racial minority status; Bradley & Corwyn, 2002; Epstein & Dauber, 1991; Lee & Burkam, 2002; Roopnarine, 2005; Whitehurst & Lonigan, 1998). These differences may extend to the family-level processes investigated in this study, which may have implications for the generalizability of these findings to other populations. Specifically, it is possible that the results of this study may not generalize to mothers and children living in higher risk situations, who exhibit more variability in their marital satisfaction, or to children situated in other preschool or child-care settings. Second, reports of marital satisfaction,

family expressivity, and home learning practices were self-report and completed by mothers only. By relying solely on maternal report for these measures, we introduce the possibility of shared-method variance, which may result in potential overestimation of effects and increased chances for Type 1 error. Furthermore, the literature suggests that marital satisfaction and emotional expressivity may differ for mothers and fathers (Halberstadt et al., 1995; Kolak & Volling, 2007), and it is reasonable that these differences may extend into the way these family processes are associated with outcomes for children. Future work should investigate these possible differences by including multiple informants, such as fathers, or observational measures of family-level variables, such as expressivity and the HLE. Finally, it should be noted that the correlational nature of these data precludes the possibility of decisively determining true causal relationships, or the direction of effects, among the study variables. As such, care should be taken in interpreting these results. Although the patterns of results suggest potential causal linkages among the study variables, future studies should use more causally oriented designs in order to test the causal nature of these relations.

### Implications

These results highlight specific points of intervention and prevention for families with preschool-aged children. Improving emergent literacy skills is a significant concern, considering the strong and stable relationship between these skills and later reading abilities (Skibbe, Grimm, et al., 2008; Storch & Whitehurst, 2002). First, this study provides some indication that strengthening the marital dyad may increase positive expressiveness in the family, which appears to be associated with the ways that mothers relate to their children. This can be done in the form of enrichment or therapeutic interventions, but this implication is somewhat limited by the exclusion of fathers from this study. It will be important to examine these processes from a dyadic framework if more definite clinical recommendations are to be made. It is well established that the marital relationship declines in satisfaction after children enter into the equation (Cowan & Cowan, 2000; Dew & Wilcox, 2011). This is occurring at a crucial time, when children are learning important skills that will influence their later reading capacities

(Duncan et al., 2007; Whitehurst & Lonigan, 1998). Also, parents who are having relational difficulties may need help in putting their issues aside in order to create a suitable learning climate for their children. The U.S. Department of Health and Human Services' Healthy People 2020 initiative identified increasing positive parenting, fostering close parent-child relationships, and improving rates of shared reading as key objectives in the promotion of health (U.S. Department of Health and Human Services, n.d.). These government-identified objectives highlight the need for further investigation into possible interventions aimed at improving these aspects of family life.

### Conclusion

By bridging two content areas that are related conceptually but are rarely studied together, this study provides important information about some of the ways that the home environment is related to children's academic outcomes. The results of this study indicate that marital satisfaction plays an important role in the creation of emotional and academic environments in the home and, by extension, is related to children's emergent literacy skills. Also, this study provides evidence that the broader emotional context of the family is important for the types of HLE constructed by the family. Children in homes with higher levels of positive family expressivity experience more home learning activities and had more sophisticated emergent literacy skills, an important indicator of future reading abilities. Taken together, these findings suggest that the marital relationship and the broader emotional environment of the family have important implications for crucial home learning activities and, by extension, young children's academic abilities.

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## APPENDIX

Home Learning Subscale of the Parenting Questionnaire (Morrison & Cooney, 2002).

1. I try to provide my child with math workbooks.

Not at all like me	Slightly like me	Somewhat like me	A lot like me	Very much like me
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2. My child and I play number games such as “This Old Man” or “1, 2, Buckle My Shoe.”

Not at all like us	Slightly like us	Somewhat like us	A lot like us	Very much like us
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3. I encourage my child to do math-related activities, such as connect-the-number pictures, mazes, and puzzles.

Not at all like me	Slightly like me	Somewhat like me	A lot like me	Very much like me
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4. How frequently do you teach your child the names of letters?

Almost never	Every so often	1 to 3 times per week	4 to 6 times per week	Daily
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5. How frequently do you teach your child letter sounds?

Almost never	Every so often	1 to 3 times per week	4 to 6 times per week	Daily
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6. How frequently do you teach your child to read words?

Almost never	Every so often	1 to 3 times per week	4 to 6 times per week	Daily
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7. How frequently do you encourage your child to write?

Almost never	Every so often	1 to 3 times per week	4 to 6 times per week	Daily
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