

# MOTHERS AND CHILDREN PERSONALIZING EMOTIONS

Brief report

Personalization in mother-child emotion talk across three contexts

Keywords: emotion talk, personalization, reminiscing, book reading, play, mother-child conversations

DRAFT

## MOTHERS AND CHILDREN PERSONALIZING EMOTIONS

Children develop earlier understanding of self and higher levels of emotional understanding if they frequently participate in family emotion talk (Dunn, Bretherton, & Munn, 1987; Dunn, Brown, & Beardsall, 1991). It is well established that parent-child emotion talk supports children's development of a healthy emotional self-concept (Fivush, 2011), which predicts later social competence and empathy (Denham et al., 2003). Consequently, several intervention programs have been developed to encourage parents' use of emotion talk in conversations with their children, particularly in the context of parent-child reminiscing about the past (e.g. Van-Bergen, Salmon, Dadds & Allen, 2009). A major concern for this line of inquiry is establishing and supporting the specific ways in which parents and children naturally engage in emotion talk. This requires, *inter alia*, a detailed understanding of the contextual differences which may influence the kinds of emotions parents discuss with their children.

There is some evidence of qualitative differences in the way parents discuss emotions across contexts (Curenton & Craig, 2011; Ziv, Smadia & Aram, 2012). However, a major methodological difficulty with previous research is that researchers do not distinguish whether the emotions discussed in different contexts relate to the emotions of the child, of the mother, or perhaps a third person mothers and children talk about. This is an important research gap because the extent to which the topic of conversation relates to the perspective of the child (rather than to another self) is of critical concern to research on personalized learning, notably in the context of parent-child book-reading. In this context, relating the topic of conversation to the child's perspective, i.e. personalizing it, has been recognized as an important strategy parents employ to gain child's interest (Cochran-Smith 1984,1986) and thus facilitate his or her understanding of the book being read (Bus, 2003). Children whose parents related the story during book reading to the child's personal experience had higher scores on a range of language-

## MOTHERS AND CHILDREN PERSONALIZING EMOTIONS

and literacy-related outcome measures (Dunst, Williams, Trivette, Simkus & Hamby, 2012).

What is missing in the personalized reading literature is establishing the extent to which parents and children personalize specific aspects of their talk, such as, for example, the emotions they discuss. Studies have examined the level of personalization in relation to mothers' cognitive talk (i.e. whether mothers used the terms think, know, and remember in reference to the first, second, or third person) and in relation to internal state talk (which encompasses emotions but also includes mental state terms, likes, and preferences, see Recchia & Howe, 2008). To our knowledge, no study has explicitly focused on the degree of personalization in relation to mothers' and children's emotion talk.

In light of intervention programs aimed at increasing parents' use of emotion talk during reminiscing (e.g., Van-Bergen et al., 2009) and the importance of parents' use of personalization in book reading (e.g., Hockenberger, Goldstein & Sirianni Haas, 1999), we set out to examine parents' and children's disposition to talk about emotions and personalization together, and in three typical family interaction contexts: storybook reading, reminiscing, and play. All three contexts play a clear functional role in children's lives (van Kleeck, 2006), and, importantly for the focus of the present study, are typified by high occurrence of emotion discussions (Brown & Dunn, 2011; Hammett, Kleeck & Huberty, 2003) and opportunities for personalization (van Kleeck, 2006). Given that past researchers found differences in parents' and children's engagement in personalized and non-personalized contexts (Kucirkova, Messer & Whitelock, 2012), we aimed to investigate variations in both parents' and children's talk, and the correspondence between the two. In view of the current research gap, it was important to examine any differences within the specific contexts as well as across contexts in mother-child emotion talk. The research questions which guided our analysis therefore were:

## MOTHERS AND CHILDREN PERSONALIZING EMOTIONS

1. Is there a difference in the degree of personalization in mothers' and children's emotion talk in book, reminiscing or play context?
2. Is there a difference in the degree of personalization in mothers' and children's emotion talk within the three conversational contexts?
3. Is there a difference between the degree of personalization in mothers' and children's emotion talk in the three contexts?

### Method

#### Participants

Participants in this study were forty-seven American mothers and their 3- to 5-year-old preschoolers (19 boys, 21 girls). Children's age ranged from 3;10 to 5;10 years ( $M = 4;9$ ,  $SD = 6.48$  months). The majority of children were European American ( $n = 35$ ), three were African American, and two were bi-racial. Basic socioeconomic information was obtained from a questionnaire that mothers completed. Mothers' education ranged from 13 to 20 years ( $M = 16.47$ ,  $SD = 2.24$ ); total family income ranged from \$15,000 to \$300,000 ( $M = \$89,846$ ,  $SD = \$56,168$ ) indicating that mothers in this sample had moderate to high levels of education and a wide range of income levels.

#### Procedure

After parental consent was obtained, children were visited at their child care center, or in a few cases, their homes in order to complete a battery of language and literacy assessments, of which only the Peabody Picture Vocabulary Test 4<sup>th</sup> edition (PPVT; Dunn & Dunn, 2007) is relevant to the current study. This assessment was included to determine whether mothers' emotion talk related to children's general language ability. After the battery of assessments was completed, dyads were visited at their homes, or in a few cases, a campus laboratory, during

## MOTHERS AND CHILDREN PERSONALIZING EMOTIONS

which time they participated in three conversational interactions—reminiscing, wordless book, and play. The order of these tasks was counterbalanced. Finally, mothers completed a questionnaire at the end of the visit, which asked about their home literacy environment as well as demographic information. The visits lasted between 45 minutes to one hour, and were audio- and video-recorded. The mother-child conversations were used in their entirety for the current study.

**Reminiscing context.** Mothers were asked to recall and discuss a unique event they had participated in with their children. Mothers were free to choose any event but to exclude memories such as birthdays or holidays as children may already have a schema for these activities (see Reese, Haden, & Fivush, 1993).

**Book context.** Mothers were asked to share a wordless storybook with their child called *Pancakes for Breakfast* (dePaola, 1978). The storyline of *Pancakes for Breakfast* is about a lady who wishes to make pancakes for breakfast, but encounters many obstacles that she must overcome. At the end of the story, there is a clear resolution to her goal of making pancakes. The book is rich in story events and although emotional expressions are clearly presented in the book, the pictures do not focus on emotion-eliciting situations only. To help mothers tell a more elaborative and coherent story, mothers were encouraged to preview the book before co-constructing the story with their children (cf. White & Low, 2002).

**Play context.** Mothers were asked to play with their child using a set of toys. Mothers were given the story starter ‘a dolphin is injured and needs to be rescued’ in order to have some consistency in the story content across dyads and to introduce story structure to the narrative by providing the obstacle and resolution. The toys included a dolphin aquarium and rescue boat with people, dolphins, and several props (e.g., life preserver, megaphone). Like the other two

## MOTHERS AND CHILDREN PERSONALIZING EMOTIONS

contexts, no specific time limit was imposed on dyads for how long the story should last or what the content of discussion should be; mothers were instructed to “play” until the story was complete. This procedure was adapted from similar elicitation strategies used by previous researchers (e.g., Griffin, Hemphill, Camp, & Wolf, 2004).

**Narrative Coding.** All three narrative contexts were transcribed verbatim first from audio files and then double-checked with video files using the CHILDES system (MacWhinney, 2000). Mothers’ and children’s narratives were parsed based on each independent clause (i.e., subject + verb + complement structures), consistent with autobiographical memory research (e.g. Cleveland & Reese, 2005). Coding for emotions was identical across the three contexts and was the same for mother and child. This involved two steps: first, all emotions were identified. Second, each emotion was given a code for the level of personalization. To this end, we extended Recchia and Howe’s (2008) coding of internal state talk by distinguishing three levels of personalization from the child’s perspective: emotions referring directly to the perspective of the child were coded as *personalized* emotions (e.g., Mother: Were you scared?); those relating to the mother were coded as *mother’s* emotions (e.g., Mother: I was happy I let you go); and *independent* emotions were emotions which related to a third person mothers and children discussed as part of their conversations (e.g., Mother: He’s very sad that the mommy dolphin got hurt [mother talking about the dolphin toy]). Utterances that provided a direct explanation of an emotion without explicit mention of emotion were also coded (e.g., She’s so happy/*because she finally got the dough*).

Inter-rater reliability was calculated by randomly selecting approximately 20% of the narratives in each context for coding by an undergraduate research assistant. Agreement for

## MOTHERS AND CHILDREN PERSONALIZING EMOTIONS

identification of emotions was 94%, and agreement for the three levels of personalization was 93% (kappa = .87)

## Results

### Descriptive Statistics

The means and standard deviations (in raw frequencies) for all emotion talk variables are displayed in Table 1. For comparisons across contexts, we used proportion of scores because of the different lengths (and the different amount of talk produced) in each session. These were calculated as the ratio of a given code (e.g., personalized emotions) divided by the total number of on-topic utterances.

As shown in Table 1, mothers and children talked about personalized emotions most in the reminiscing context, followed by the play and book context. They discussed independent emotions most in the book context, followed by the play and reminiscing context. Mothers discussed their own emotions most in the reminiscing context, which was almost the same amount as in the play context. Children followed the same pattern, with very little reference to mothers' emotions in the book context.

### Preliminary Analyses

Next, data were examined for parametric distribution. The distribution was positively skewed, indicating that most of the scores were lower than the normatively expected values, which is typical of data containing both very high and very low scores across contexts. Given that some variables were not normally distributed even after log transformation, we decided to use non-parametric analyses (Greene & Zhang, 1997). Before computing the main analyses, we checked whether any of the focal variables were significantly related to background variables

## MOTHERS AND CHILDREN PERSONALIZING EMOTIONS

such as mothers' educational level, children's gender, and children's PPVT standard scores ( $M = 106.28$ ,  $SD = 13.16$ ). Spearman's rho was calculated and Bonferroni correction for multiple comparisons was applied, resulting in an  $\alpha$  level of .001. We found no significant correlations which is likely due to the small number of cases in the three personalization variables.

### Cross-Contextual Comparisons

To address the first research question of this study, a Friedman test was used to examine the difference in mothers' and children's use of personalization in emotion talk across the three contexts (reminiscing, book, and pretend play). To reduce the large number of possible comparisons, we ran the test separately for mothers and children. The Friedman test showed that there was a significant difference between the scores of mothers for the three contexts ( $\chi^2 = 164.341$ ,  $df = 8$ ,  $p = .001$ ). The Wilcoxon test was then performed to establish where these variations lie. As can be seen from Table 2, mothers personalized their emotion talk significantly more in the reminiscing context than during book reading or play. In contrast, emotion talk relating to someone other than mother or child (coded as independent) was significantly higher in book reading than reminiscing and play. In addition, independent emotion talk was significantly higher in the play than reminiscing context. There was no significant difference across contexts in relation to mothers' talk about their own emotions. Results of the cross-contextual comparisons of children's data were similar to those of the mothers', with a Friedman test showing a significant difference across the three contexts ( $\chi^2 = 148.980$ ,  $df = 8$ ,  $p = .001$ ) and personalized emotion talk significantly higher in the reminiscing than book or play context, but no significant difference between the play and book context. Children's independent talk was significantly higher in the book than in the reminiscing and play context, and there was no contextual difference in children's talk about mothers' emotions.

## MOTHERS AND CHILDREN PERSONALIZING EMOTIONS

### **Within-Contextual Comparisons**

Within-context comparisons showed that in all three contexts, there was a significant difference between the three kinds of personalization mothers and children discussed (see Table 3 for details). The difference between personalized and independent emotions was significant for both mothers and children and in all three contexts. For both mothers and children, the means were almost the same for personalized and mothers' own emotions in the book context, and for mothers' own and independent emotions in the reminiscing context. In the play context, the means were almost the same for mothers' reference to their own and their child's emotions. For children, however, this difference was statistically significant in all three contexts, confirming that children referred to their own emotions much more frequently than to their mothers' emotions.

### **Difference between mothers' and children's personalization in emotion talk**

To examine the correspondence between mothers' and children's personalization in their emotion talk, we looked at the difference in means between mothers and children in each context (see Table 4). Wilcoxon-rank test showed that while for the book and play contexts, personalization in emotion talk was similar for the mothers and children, mothers talked significantly more about personalized emotions than did children in the reminiscing context. Additionally, in the play and reminiscing contexts, mothers talked about their own emotions significantly more than did children. For other comparisons, there were no significant differences between the proportions of personalization in mothers' and children's emotion talk.

### **Discussion**

We set out to establish the extent to which mothers and children discussed their own and others' emotions during reminiscing, book reading and play. Given the nature of topics typically

## MOTHERS AND CHILDREN PERSONALIZING EMOTIONS

discussed in the three contexts, it is reassuring that we found a significant cross-context difference, notably between personalized and independent emotion talk in the reminiscing and book context. What is interesting is that the discussion of personalized emotions did not significantly differ between the book and play contexts and the discussion of mothers' own emotions occurred with almost the same frequency in all three contexts. In addition, within-context analyses revealed that while mothers discussed the child's and their own emotions in the book and play context at about the same rate, children focused on their own emotions significantly more than on mothers' emotions in all three contexts.

These findings raise two important issues for clinicians and future research. First, according to the theoretical work on self-perspective (see Decety & Jackson, 2004), the focus on one's own emotions is perceived as the cognitive "default mode", which over time and through socialization, develops into the ability to attribute self-perspective to others. This may be why mothers and children discussed all three kinds of emotions differently, with overall the highest means of frequency for personalized emotions for children (in the reminiscing context) and for independent emotions for mothers (in the book context). A developmental explanation may also apply to the finding that mothers discussed their own emotions relatively often, while this level of personalization was almost absent from children's emotion talk. In light of the emphasis placed on reminiscing as the context for studying emotion-oriented family talk (e.g. Fivush, Berlin, Sales, Mennuti-Washburn, & Cassidy, 2003), it seems important to establish how discussing children's own emotions (rather than e.g. their mothers' or of someone both mothers and children know) may be implicated in children's developmental trajectories. This is related to our finding that in the book context, parents and children naturally engaged in discussing others'

## MOTHERS AND CHILDREN PERSONALIZING EMOTIONS

emotions (i.e. those relating to the book character) rather than their own emotions. In this context, discussing independent emotions (also known as emotional framing) has been found to significantly contribute to children's use of emotional language (Denham & Auerbach, 1995), which has implications for children's later patterns of social behavior (Denham et al., 2003). Future research may therefore establish how the efforts behind the implementation of personalization into parent-child book reading (e.g. Kucirkova, Messer & Whitelock, 2012) influence children's and their parents' use of emotion talk, especially in relation to personalized books which incorporate direct reference to the child (e.g. child's own name and his or her friends, see e.g. Demoulin, 2003). For future research on personalized learning environments supported by specific technological tools, (see e.g. Hartley, 2007; O'Donhogue, 2009) it is an important finding that in the book and play contexts, children and mothers naturally engaged in discussion of personalized emotions, although for both this happened with significantly lower frequency than in the reminiscing context.

Second, our study showed that the discussion of personalized and independent emotions is highly unbalanced between reminiscing and book-reading contexts. Given that discussing others' (rather than one's own) is an important milestone in the development of social cognition (Carpenter, Nagell, Tomasello, Butterworth & Moore, 1998) and at the same time, discussing children's own rather than others' emotions increases children's engagement in literacy activities (e.g. Pakulski & Kaderavek, 2004), we recommend that practitioners adopt a balanced approach for evaluating and supporting parents' use of personalized and independent emotion-talk. This recommendation applies especially in contexts which have less well established developmental outcomes and which often exhibit characteristics of both reminiscing and book-reading

## MOTHERS AND CHILDREN PERSONALIZING EMOTIONS

discussion, such as for example parent-child conversations during digital photo album sharing, which have become increasingly popular with parents and children.

By establishing a clear context-and speaker-related difference, we hope that our study sets the stage for future interest in the level of personalization in mother-child emotion talk in various contexts, both from the developmental and practical perspective.

DRAFT

References

Brown, J. R., & Dunn, J. (2011). 'You can cry, mum': The social and developmental implications of talk about internal states. *British Journal of Developmental Psychology*, **9**, 237-256. DOI:10.1111/j.2044-835X.1991.tb00874.x

Bus, A. (2003). Social-emotional requisites for learning to read. In A. van Kleeck, Stahl, S. A., & Bauer, E. B. On reading books to children: parents and teachers (eds.) *On reading books to children: Parents and teachers*. Mahwah, NJ: Lawrence Erlbaum.

Carpenter, M., Nagell, K., Tomasello, M., Butterworth, G., & Moore, C. (1998). Social cognition, joint attention, and communicative competence from 9 to 15 months of age. *Monographs of the Society for Research in Child Development*. **63**, i+iii+v-vi+1-174. DOI:10.2307/1166214

Cleveland, E. S., & Reese, E. (2005). Maternal structure and autonomy support in conversations about the past: contributions to children's autobiographical memory. *Developmental Psychology*, **41**, 376-388. DOI:10.1037/0012-1649.41.2.376

Cochran-Smith, M. (1984). *The making of a reader*. Ablex Pub. Corp (Norwood, NJ).

Cochran-Smith, M. (1986). Reading to children: A model for understanding texts. *The acquisition of literacy: Ethnographic perspectives*, **21**, 35-54.

Currenton, S. M., & Craig, M. J. (2011). Shared-reading versus oral storytelling: Associations with preschoolers' prosocial skills and problem behaviours. *Early Child Development and Care*, **181**, 123-146. DOI:10.1080/03004430903292208

Decety, J., & Jackson, P. L. (2004). The functional architecture of human empathy. *Behavioral and Cognitive Neuroscience Reviews*, **3**, 71-100. DOI:10.1177/1534582304267187

Demoulin, D. (2003). Getting kids hooked on reading-early! *Education*, **123**, 663-665.

## MOTHERS AND CHILDREN PERSONALIZING EMOTIONS

Denham, S. A., & Auerbach, S. (1995). Mother-child dialogue about emotions and preschoolers' emotional competence. *Genetic, Social, and General Psychology Monographs*, **121**, 313-337.

Denham, S. A., Blair, K. A., DeMulder, E., Levitas, J., Sawyer, K., Auerbach-Major, S., & Queenan, P. (2003). Preschool emotional competence: Pathway to social competence? *Child Development*, **74**, 238-256.

dePaola, T. (1978). *Pancakes for Breakfast*. Orlando, FL: Harcourt, Inc.

Dunn, J., Bretherton, I., & Munn, P. (1987). Conversations about feeling states between mothers and their young children. *Developmental Psychology*, **23**, 132-139. DOI:10.1037/0012-1649.23.1.132

Dunn, J., Brown, J., & Beardsall, L. (1991). Family talk about feeling states and children's later understanding of others' emotions. *Developmental Psychology*, **27**, 448-455. DOI:10.1037/0012-1649.27.3.448

Dunn, L. M., & Dunn, L. M. (2007). *Peabody Picture Vocabulary Test-4<sup>th</sup> edition (PPVT-4)*, Circle Pines, MN: American Guidance Service.

Dunst, C. J., Williams, A. L., Trivette, C. M., Simkus, A., & Hamby, D. W. (2012). Relationships between inferential book reading strategies and young children's language and literacy competence. *Center for Early Literacy Learning Reviews*, **5**, 1-10.

Fivush, R., Berlin, L., Sales, J. M. D., Mennuti-Washburn, J., & Cassidy, J. (2003). Functions of parent-child reminiscing about emotionally negative events. *Memory*, **11**, 179-192. DOI:10.1080/741938209

Fivush, R. (2011). The development of autobiographical memory. *Annual Review of Psychology*, **62**, 559-582. DOI:10.1146/annurev.psych.121208.131702

## MOTHERS AND CHILDREN PERSONALIZING EMOTIONS

Greene, W. H., & Zhang, C. (1997). *Econometric Analysis*. Upper Saddle River, NJ: Prentice Hall.

Griffin, T. M., Hemphill, L., Camp, L., & Wolf, D. P. (2004). Oral discourse in the preschool years and later literacy skills. *First Language*, **24**, 123-147.

DOI:10.1177/0142723704042369

Hammett, L. A., van Kleeck, A. V., & Huberty, C. J. (2003). Patterns of parents' extratextual interactions during book sharing with preschool children: A cluster analysis study.

*Reading Research Quarterly*, **38**, 442-468. DOI:10.1598/RRQ.38.4.2

Hartley, D. (2007). Personalisation: The emerging 'revised' code of education. *Oxford Review of Education*, **33**, 629-642. DOI:10.1080/03054980701476311

Hockenberger, E., Goldstein, H., & Sirianni Haas, L. (1999). Effects of commenting during joint book reading by mothers with low SES. *Topics for Early Childhood Special Education*, **19**, 15-27. DOI:10.1177/027112149901900102

Kucirkova, N., Messer, D., & Whitelock, D. (2012). Parents reading with their toddlers: the role of personalisation in book engagement. *Journal of Early Childhood Literacy, published online before print March 27, 2012*. DOI: 10.1177/1468798412438068

Kucirkova, N., Messer, D. & Whitelock, D. (2012). Sharing personalised books: A practical solution to the challenges posed by home book reading interventions. *Literacy Information & Computer Education Journal*, **1**, 263-272.

MacWhinney, B. (2000). The CHILDES project: Tools for analyzing talk, Vol. 1: Transcription format and programs (3rd ed.). Mahwah, NJ: Lawrence Erlbaum Associates.

O'Donoghue, J. (2009). *Technology-supported environments for personalized learning: Methods and case studies*. Information Science Reference-Imprint of: IGI Publishing.

## MOTHERS AND CHILDREN PERSONALIZING EMOTIONS

Pakulski, L., & Kaderavek, J. (2004). Facilitating literacy using experience books: A case study of two children with hearing loss. *Communication Disorders Quarterly*, **25**, 179-188. DOI:10.1177/15257401040250040301

Recchia, H. E., & Howe, N. (2008). Family talk about internal states and children's relative appraisals of self and sibling. *Social Development*, **17**, 776-794. DOI:10.1111/j.1467-9507.2007.00451.x

Reese, E., Haden, C. A., & Fivush, R. (1993). Mother-child conversations about the past: Relationships of style and memory over time. *Cognitive Development*, **8**, 403-430. DOI:10.1016/S0885-2014(05)80002-4

Van Bergen, P., Salmon, K., Dadds, M. R., & Allen, J. (2009). The effects of mother training in emotion-rich, elaborative reminiscing on children's shared recall and emotion knowledge. *Journal of Cognition and Development*, **10**, 162-187.

van Kleeck, A. (2006). Fostering inferential language during book sharing with prereaders: A foundation for later text comprehension strategies. In: A. vanKleeck (ed.) *Sharing Books and Stories to Promote Language and Literacy*. San Diego: Plural.

White, S., & Low, J. (2002). When mothers turn a visual story into a verbal one for their children: Previewing helps with the telling, conversing, and remembering. *International Journal of Behavioral Development*, **26**, 360-370. DOI:10.1080/01650250143000256

Ziv, M., Smadja, M. L., & Aram, D. (2012). Mothers' mental-state discourse with preschoolers during storybook reading and wordless storybook telling. *Early Childhood Research Quarterly*, **28**, 177-186. DOI:10.1016/j.ecresq.2012.05.005

# MOTHERS AND CHILDREN PERSONALIZING EMOTIONS

## Tables

Table 1. *Frequencies of Mothers' and Children's Emotion Talk in Each Context*

		Mother Variables			Child Variables		
		Range	Mean	SD	Range	Mean	SD
<b>Reminiscing</b>	Personalized	0-11	3.18	2.39	0-10	2.57	2.47
	Mother	0-14	0.48	2.22	0-2	0.05	0.32
	Independent	0-3	0.10	0.50	0-1	0.02	0.16
<b>Book Context</b>	Personalized	0-3	0.50	0.85	0-2	0.23	0.58
	Mother	0-2	0.15	0.48	0-1	0.02	0.16
	Independent	0-22	5.43	5.00	0-8	1.63	1.93
<b>Play Context</b>	Personalized	0-6	0.58	1.15	0-2	0.45	0.68
	Mother	0-2	0.42	0.68	0-1	0.05	0.22
	Independent	0-15	1.90	3.05	0-6	1.25	1.77

## MOTHERS AND CHILDREN PERSONALIZING EMOTIONS

Table 2. *Cross-Contextual Comparisons of Mothers' and Children's Emotion Talk*

	Personalized	Independent	Mother
<b>Reminiscing versus Book context</b>	(Z) <sup>2</sup>	(Z) <sup>1</sup>	(Z) <sup>2</sup>
Mother	-4.979**	-4.937**	-.533
Child	-4.638**	-4.517**	-.447
<b>Book versus Play context</b>	(Z) <sup>2</sup>	(Z) <sup>2</sup>	(Z) <sup>1</sup>
Mother	-1.477	-4.697**	-1.363
Child	-.682	-4.039**	.001
<b>Play context versus Reminiscing</b>	(Z) <sup>1</sup>	(Z) <sup>2</sup>	(Z) <sup>2</sup>
Mother	-5.159**	-3.815**	-.876
Child	-4.675**	-3.823**	-.001

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

Z<sup>1</sup> values based on positive ranks

Z<sup>2</sup> values based on negative ranks

# MOTHERS AND CHILDREN PERSONALIZING EMOTIONS

Table 3. *Within-Context Comparisons for Mothers' and Children's Emotion Talk*

	Reminiscing	Book	Play
<b>Independent versus Personalized emotions</b>	(Z) <sup>1</sup>	(Z) <sup>2</sup>	(Z) <sup>2</sup>
Mother	-5.160**	-4.583**	-2.371**
Child	-4.782**	-4.305**	-2.053*
<b>Mother versus Personalized emotions</b>	(Z) <sup>1</sup>	(Z) <sup>1</sup>	(Z) <sup>1</sup>
Mother	-4.688**	-2.621	-6.97
Child	-4.782**	-2.197*	-3.154**
<b>Mother versus Independent emotions</b>	(Z) <sup>2</sup>	(Z) <sup>1</sup>	(Z) <sup>1</sup>
Mother	.700	-4.937**	-3.162*
Child	-.447	-4.458**	-3.823**

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

$Z^1$  values based on positive ranks

$Z^2$  values based on negative ranks

# MOTHERS AND CHILDREN PERSONALIZING EMOTIONS

Table 4. *Mother –Child Means Comparison In Individual Contexts*

	Personalized	Independent	Mother
<b>Reminiscing context (mother versus child):</b>	$(Z)^2$	$(Z)^2$	$(Z)^2$
Wilcoxon rank test:	-2.530*	-1.069	-2.201*
<b>Book context (mother versus child):</b>	$(Z)^2$	$(Z)^2$	$(Z)^2$
Wilcoxon rank test:	-7.34	-1.742	-1.461
<b>Play context (mother versus child):</b>	$(Z)^1$	$(Z)^2$	$(Z)^2$
Wilcoxon rank test:	-.259	-.821	-3.111*

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

$Z^1$  values based on positive ranks

$Z^2$  values based on negative ranks