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Ahmetoglu, Emine; Ildiz, Gökçen Ilhan; Acar, Ibrahim H.; and Encinger, Amy J., "CHILDREN'S EMOTION REGULATION AND ATTACHMENT TO PARENTS: PARENTAL EMOTION SOCIALIZATION AS MODERATOR" (2018). *Faculty Publications, Department of Child, Youth, and Family Studies.* 152. http://digitalcommons.unl.edu/famconfacpub/152

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SOCIAL BEHAVIOR AND PERSONALITY, 2018, 46(x), xxx-xxx © 2018 Scientific Journal Publishers Limited. All Rights Reserved. https://doi.org/10.2224/sbp.6795

CHILDREN'S EMOTION REGULATION AND ATTACHMENT TO PARENTS: PARENTAL EMOTION SOCIALIZATION AS MODERATOR

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We examined the associations among parental emotion socialization, and children's emotion regulation and attachment to parents. In particular, we examined the moderating role of parental emotion socialization in the relationship between children's emotion regulation and attachment to parents. Participants were 78 Turkish children (49 boys) aged from 60 to 77 months and their parents. Parents reported on the socialization strategies they used for their children's emotions and on their children's emotion regulation, and we assessed children's attachment to parents via the Doll Story Completion Task. Results revealed that parents' minimization regulation and attachment to parents. When parents' response was punitive, children with poor emotion regulation displayed stronger attachment to parents than children with robust emotion regulation. In addition, girls had a more secure attachment than boys to parents. Our results highlight the importance of children's emotion regulation and parental emotion socialization for children's secure early attachment to parents.

Keywords: children's attachment to parents, Turkish children, children's emotion regulation, parental emotion socialization.

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An earlier version of this paper was presented at the International Scientific Researches Congress on Humanities and Social Sciences, Istanbul, Turkey in April 2017.

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The formation of attachment in early childhood lays the foundation for later social relationships and development of self-concept, and social–emotional skills (Pearson, Cowan, Cowan, & Cohn, 1993). Bowlby (1982) defines *attachment* as the strong emotional tie of one person to another, which is important and meaningful. The attachment system is critical for the newborn child's survival and development (Pearson et al., 1993). Children with a secure attachment to primary attachment figures are likely to explore their environment freely during the first year of life (Bowlby, 1982) and are less likely to have internalizing and externalizing behavior problems (Brumariu & Kerns, 2010).

The process of socialization begins in the early years of childhood, whereby individuals learn to communicate and socialize through verbal and nonverbal behavior, primarily with their parents. *Emotion socialization* refers to parents' behavior, communication, and response to their children's negative emotional expression (Eisenberg, Cumberland, & Spinrad, 1998).

Emotion regulation is defined as individuals' internal and external processes responsible for monitoring, assessing, and altering their emotional reactions (Thompson, 2014). Emotion regulation enables parents and children to react to daily experiences in a more tolerant and flexible way (Thompson, 2014). Thus, emotion regulation has an important role in social adaptation and functionality of parents and children.

Children's Emotion Regulation and Attachment

Previous researchers have conceptualized the association between emotion regulation and attachment from a unidirectional perspective, that is, either that children's emotion regulation predicts the quality of their attachment to their parents, or that attachment security predicts the development of children's emotion regulation (see e.g., Cassidy, 1988; Kiel & Kalomiris, 2015). However, in recent theoretical and empirical studies, researchers have approached this association from a bidirectional perspective (e.g., Kiel & Kalomiris, 2015; Waters et al., 2010). Kiel and Kalomiris (2015) posited from this perspective that parents and parenting behavior, including attachment between parent and child, "do not unidirectionally influence children's [emotion regulation]" (p. 11), but rather, children's individual characteristics, such as their emotion regulation, also influence parent-child interaction, including attachment. In their empirical study, Waters et al. (2010) explored the bidirectional association between children's emotion regulation and their attachment to their parents. They used laboratory tasks and observation to investigate this association in preschool-aged children and found that the children's ability to understand negative emotions significantly predicted mother-child concordance. They also found that when the children with better understanding of their negative emotions were in conversation with their mothers about their negative emotional experiences, they used avoidance as

part of their regulation strategy; this was consistent with the mothers' validation provided via interviews and attachment reports.

In addition, from a temperament-based perspective (Groh et al., 2017; Rothbart, 2011), children's temperamental characteristics, including a disposition to regulate their emotions, are related to the quality of their attachment with their parents. For example, Groh et al. (2017) conducted a meta-analysis to examine the association between temperament and attachment in children and found that negative temperament, that is, lack of control of emotions such as anger and fear, predicted security, avoidance, and resistance in the children's attachment with their parents. Groh et al. concluded that it is important to include temperament as an individual characteristic in research on children's attachment (e.g., van IJzendoorn & Bakermans-Kranenburg, 2012). Thus, there is a lack of research on both the bidirectional association between children's emotion regulation and attachment, and the path from emotion regulation to attachment. We thus attempted to address this gap, in particular with a non-Western population, by examining the predictive role of Turkish children's emotion regulation in their attachment with their parents.

Parental Emotion Socialization in Early Childhood

Parents guide children's emotion socialization by identifying and recognizing emotions, discussing their importance with them, modeling emotional behavior, including expression and regulation of emotions, and setting the family emotional atmosphere in the home (Eisenberg, Cumberland, & Spinrad, 1998; Morris, Silk, Steinberg, Myers, & Robinson, 2007). Parents support children's emotion socialization through positive emotion-related behavior, such as emotion-focused responses that help children to reduce the effects of emotional arousal in a social context (Spinrad, Stifter, Donelan-McCall, & Turner, 2004; Yagmurlu & Altan, 2010). Denham, Bassett, and Wyatt (2007) found that when parents display positive behavior in response to their children's emotional expression (e.g., problem-focused behavior), this behavior is related to the children's positive behavior, such as ease of adaptation to emotional arousal, for example, stimulating anger or fear. In contrast, when parents have a negative reaction, such as minimization, to the children's emotions, the parents suppress and block the children's emotional expression (Denham et al., 2007).

Overall, previous results have shown that parent-child relationships that are based on sensitivity and warmth, namely, parental support of the children's emotional expression, are related to better emotion regulation in the children (Denham et al., 2007). For example, Denham et al. (2007) found that when parents displayed positive parenting approaches, such as supporting the children's negative emotions and autonomy, these were related to higher levels of preschool children's emotion regulation in their interactions with peers. In contrast,

unsupportive and authoritarian approaches by parents, such as restraining the children's emotional expression, were related to lack of emotion regulation in the children (Denham, 1998). For example, Calkins, Smith, Gill, and Johnson (1998) showed that parents' discipline-based approaches to the children's emotional expression (e.g., punishment) were related to the children's negative emotional expression, such as reactions of anger in social situations.

Attachment, Parental Emotion Socialization, and Emotion Regulation in Turkish Culture

Few researchers have examined the relationships of attachment, parental socialization, and emotion regulation with a Turkish sample. However, Yagmurlu and Altan (2010) found that Turkish parents' negative socialization of their children's emotions, such as power assertion, was negatively related to the children's emotion regulation. In addition, Sahin and Ari (2015) found in their study of the association between attachment patterns of 6-year-olds and their emotion regulation skills, a significant association between attachment patterns and emotion regulation skill scores.

Study Purpose

To our knowledge, no researcher has examined how children's emotional regulation and parental emotion socialization predict parent-child attachment in the Turkish culture. Therefore, in this study we examined this topic to gain an understanding of how parents' emotion socialization moderates the association between the children's emotion regulation and their attachment to their parents. We thus addressed the following research questions:

Research Question 1: To what extent is Turkish children's emotion regulation associated with their attachment to their parents?

Research Question 2: To what extent is Turkish parents' emotion socialization associated with the children's attachment to their parents?

Research Question 3: To what extent does Turkish parents' emotion socialization moderate the association between the children's emotion regulation and their attachment to their parents?

We expected that children's better emotion regulation would be associated with their secure attachment to their parents. We hypothesized that positive parental emotion socialization, such as emotion-focused responses and expressions of encouragement, would be positively related to secure attachment patterns and children's emotion regulation, and negative parental emotion socialization, such as problem-focused responses, minimization and punitive reactions, would be negatively related to attachment patterns and children's emotion regulation. We expected that positive parental emotion socialization would ameliorate the association between children's poor emotion regulation and the level of their attachment to their parents. In contrast, negative parental emotion socialization would detract from the effects of emotion regulation and children's attachment to their parents.

Method

Participants and Procedure

Participants were 78 children (49 boys) aged from 60 to 77 months (M = 68.56, SD = 4.73) and their parents. Each child had two parents except for one child with a single (divorced) mother. In regard to the socioeconomic status of the parents, 16.7% reported a high level, 75.6% a medium level, and 7.7% a low-level status.

After we had received approval from the university's Ethics Committee and the Directorate of the National Ministry of Education to conduct the study, parents and teachers were invited by the first author to participate in this study. Once consent was obtained, the researchers and teachers provided parents with the Emotion Regulation Checklist (ERC; Shields & Cicchetti, 1997) and the Coping with Children's Negative Emotions Scale (CCNES; Fabes, Eisenberg, & Bernzweig, 1990). Parents returned the completed survey to their child's teacher who delivered them to the researcher. Children's attachment to their parents was assessed by the researcher at their preschools. There was no time limit for children to respond to the attachment stories. Testing took approximately 15 minutes for each child.

Measures

Attachment. To assess attachment we used the Doll Story Completion Task (DSCT; Cassidy, 1988). The DSCT, which is a projective story-based measurement tool developed to identify children's attachment status, was adapted for Turkish samples and tested for validity and reliability by Seven (2006). Children are asked to complete six stories, each lasting approximately three minutes, with a family of dolls. Children are expected to reveal their mental attachment representations through these stories. Each story is scored by the experimenter on a 5-point scale ranging from 1 = less secure to 5 = more secure attachment. We averaged the scores to create a composite attachment score for each child. The relationship in each story is categorized as secure/strong if the doll character is viewed as valuable, and the parental relationship is depicted as important, special, and warm. One researcher only administered the measure because of the cost, amount of time training for the assessment, and restriction of access to preschools in the district. Cronbach's $\alpha = .78$ in Seven's (2006) Turkish sample, which was acceptable, with a test-retest correlation of .63 in the validated scale. Cronbach's $\alpha = .69$ in this study, which was low.

Emotion regulation. We used the ERC to measure the children's emotion regulation. The ERC is a 24-item checklist, which is completed by the children's parents, and is rated on a Likert-type scale ranging from 1 = never to 4 = always. The ERC, which has shown validity and consistency with Turkish samples (Yagmurlu & Altan, 2010), includes items on liability/negativity, which tap into emotional dysregulation and regulation. A sample item is "Responds positively to neutral or friendly overtures by peers." A composite unitary score for emotion regulation was created by reversing items of liability/negativity and averaging these items with emotion regulation items (Cronbach's $\alpha = .77$). Therefore, higher scores indicated more effective emotion regulation. Scores ranged from 2.27 to 3.87 for emotion regulation in this study.

Parental emotion socialization. We used the CCNES to measure parental emotion socialization. The CCNES, which has been found to have strong reliability and validity among Turkish preschool children (Altan-Aytun, Yagmurlu, & Yavuz, 2013; Yagmurlu & Altan, 2010), comprises 12 scenarios that reflect situations in which children experience negative emotions. Parents rate each item in a specific situation on a 5-point Likert-type scale ranging from 1 = I never do this to 5 = I always do this. There are five possible parent responses to the children's negative emotions. The problem-focused response refers to parents scaffolding and supporting children in problem solving (i.e., Tell my child that I'll help him/her practice so that he/she can do better next time, $\alpha = .74$). The emotion-focused response refers to parents' ability to help children feel better in an emotional situation (i.e., Comfort my child and try to make him/ her feel better, $\alpha = .82$). Encouragement expression refers to parental support for the child's emotional expression (i.e., Encourage my child to talk about his/ her feelings of embarrassment, $\alpha = .79$). Minimization reaction refers to parental minimization of the child's emotional reaction and expression (i.e., Tell my child to quit overreacting and being a baby, $\alpha = .83$). Punitive reaction refers to parents' verbal or physical punishment-based responses to the child's emotional expression (i.e., Tell my child that if he/she doesn't stop then he/she won't be allowed to go out any more, $\alpha = .81$).

Data Analysis

Before performing regression analysis, we examined the normality of each variable. We applied the criteria of accepted range for skewness, which is ± 2 , and kurtosis, which is ± 7 (Curran, West, & Finch, 1996). As no variable violated these criteria, transformation was not necessary. Descriptive statistics are shown in Table 1. Emotion regulation and parental emotion socialization were centered at the sample mean (i.e., grand-mean centered) for main effect and interaction terms, and we used simple slope analysis to explore significant interaction effects in moderation models (Aiken & West, 1991).

Table 1. Descriptive Statistics and Intercorrelations among Study Variables	Intercorrel	ations amor	ng Study V	/ariables						
Variable	-	2	ю	4	5	9	٢	~	6	10
1. Attachment										
2. Emotion regulation	.10	ı								
3. Punitive response	03	29**								
4. Minimization reaction	26*	25**	.58**	ı						
5. Encouragement expression	-00	.02	.02	.14	ı					
6. Emotion-focused response	60.	.29*	17	60.	.43**	ı				
7. Problem-focused response	II.	.25*	15	.10	.52**	.74**	ı			
8. Socioeconomic status of parents	05	$.30^{**}$	25*	31**	07	09	06	ı		
9. Gender	38**	10	10	.12	10	08	07	$.26^{*}$	ı	
10. Age of child	.02	.01	14	30**	12	10	08	.19	.07	
M	3.55	3.09	1.90	2.68	3.82	4.11	4.22	0.00		68.49
SD	0.78	0.35	0.78	0.76	0.65	0.48	0.48	0.59		4.73
Skewness	-0.66	-0.10	0.90	-0.22	-0.71	-1.18	-0.63	0.02		-0.20
Kurtosis	-0.28	-0.23	0.27	-0.60	0.40	2.41	-0.04	-1.13		-1.14
Cronbach's α	69.	<i>TT.</i>	.81	.83	<i>91</i> .	.82	.74			
<i>Note</i> . Gender: $1 = \text{girl}, 2 = \text{boy.} * p < .05, ** p < .01$: .05, ** <i>p</i> < .	01.								

CHILDREN'S EMOTION REGULATION AND ATTACHMENT

7

Power analysis using hierarchical multiple regression was performed to examine whether or not there was enough power to detect effects (Cohen, 1988; Soper, 2017). Results revealed that at $\alpha = .05$ and given a medium effect size (.18), the statistical power was .79 with N = 78.

Results

Preliminary analyses were conducted to examine any gender differences on all variables. Independent t-test results showed that attachment differed only by gender: Girls (M = 3.95, SD = 0.67) felt more secure attachment than boys (M = 3.34, SD = 0.76) with their parents, t(76) = 3.58, p < .01), d = .48 (see Table 1).

Children's Emotion Regulation, Parental Emotion Socialization, and Children's Attachment to their Parents

We performed hierarchical regression analyses in which attachment was regressed on emotion regulation and parental emotion socialization through problem-focused response, emotion-focused response, encouragement expression, minimization reaction, and punitive reaction with one parent from each family, and all two-way interaction terms between emotion regulation and parental emotion socialization variables, namely, emotion regulation \times minimization reaction. We conducted three-step hierarchical regression analyses in which the first step included the child's age, gender, and the parent's socioeconomic status. Main effects were entered in the second step, and the two-way interaction terms were entered in the third step. Results are presented in Table 2.

In Step 1, demographic variables accounted for 15% of the variance in children's attachment with their parents, F(3, 74) = 4.32, p = .007, $R^2 = .15$. In the second step, the main effects explained 10% of additional variance, F(6, 68) = 1.91, p = .16, $R^2 = .25$. In the third step, the interaction terms explained 14% of additional variance, F(5, 63) = 2.83, p = .02, $R^2 = .39$. Children's gender was negatively associated with their attachment to their parents ($\beta = -.39$, p < .01), such that girls had more secure attachment than boys with their parents. In addition, the parent's minimization reaction negatively predicted children's level of attachment ($\beta = -.33$, p < .01).

The interaction between children's emotion regulation and the parent's problem-focused response ($\beta = -.08, p > .05$), children's emotion regulation and the parent's encouragement expression ($\beta = .08, p > .05$), and children's emotion regulation and the parent's emotion-focused response ($\beta = -.35, p > .05$) were nonsignificant.

The interaction between children's emotion regulation and the parent's minimization reaction was significantly positively predictive of children's attachment to their parents ($\beta = .33$, t = 2.42, p = .01). This interaction is displayed

in Figure 1. Simple slope analysis showed that the slope for the interaction of children's emotion regulation with their attachment to their parents when the parent's minimization reaction was frequent (high score), or at the midpoint score was not significantly different from zero (t = 0.80, p = .42 and t = -1.64, p = .10, respectively); however, when the parent's minimization reaction was infrequent (low score), the slope for the interaction of children's emotion regulation with their attachment to their parents was significantly different from zero (t = -2.81, p < .01). Thus, when the parent's minimization reaction was at a high or average level, children's emotion regulation was unrelated to their attachment to their parents. However, when the parent's minimization reaction was low, children with poor emotion regulation displayed stronger attachment to their parents than did children who could regulate their emotions well.

	Attachment		
Variable	В	SE B	β
Step 1			
Child's age	0.01	0.02	.04
Child's gender	-0.64	0.18	39**
PES	0.04	0.09	.05
Total R^2			.15
F			4.32**
Step 2			
Child's emotion regulation	-0.02	0.09	01
Minimization reaction	-0.26	0.11	33*
Problem-focused response	0.18	0.13	.23
Emotion-focused response	0.04	0.12	.05
Encouragement expression	-0.18	0.09	23
Punitive response	0.13	0.11	.17
Total R^2			.25
ΔR^2			.10
F			1.59
Step 3			
$ER \times MR$	0.24	0.09	.33**
$ER \times PFR$	-0.06	0.15	08
$ER \times PR$	-0.32	0.10	51*
$ER \times EE$	0.07	0.11	.08
$ER \times EFR$	-0.23	0.12	35
Total R^2			.39
ΔR^2			.14
F			2.83*

Table 2. Results of Hierarchical Regression Analysis for Children's Emotion Regulation and Parental Emotion Socialization Predicting Children's Attachment to Their Parents

Note. N = 78. PES = parental emotion socialization, ER = emotion regulation, MR = minimization reaction, PFR = problem-focused response, PR = punitive response, EE = encouragement expression, EFR = emotion-focused response. * p < .05, ** p < .01.

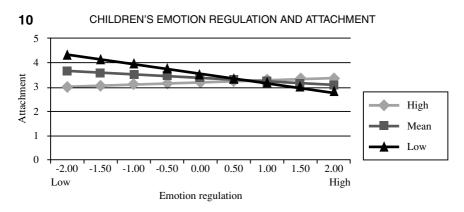


Figure 1. Parents' minimization of children's emotional reaction and emotion regulation predicting their attachment to their parents.

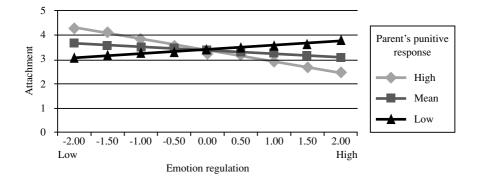


Figure 2. Parents' punitive response and children's emotion regulation predicting their attachment to their parents.

The interaction between children's emotion regulation and the parent's punitive response was significantly negatively related to children's attachment to their parents ($\beta = -.51$, t = -3.18, p <. 01). This interaction is displayed in Figure 2. Simple slope analysis showed that the slope for the interaction between children's emotion regulation and their attachment to their parents when the parent's punitive response was at a low or midpoint level was not significantly different from zero (t = 1.76, p = .08 and t = -0.14, p = .10); however, when the parent's punitive response was very frequent (high score), the slope for the interaction between children's emotion regulation and their attachment to their garents was significantly different from zero (t = -3.17, p < .01). Thus, when the parent used a punitive response infrequently or only the average number of times for our participant group (low or midpoint score), children's emotion regulation

was unrelated to their attachment to their parents. However, when the parent often used a punitive response, children with poor emotion regulation displayed stronger attachment to their parents than did children who could regulate their emotions well.

Discussion

In this study we examined the interplay between parental emotion socialization and children's emotion regulation with respect to the children's attachment to their parents. First, we found that when parents seldom used the minimization reaction, children with poor emotion regulation displayed stronger attachment to their parents than children with effective emotion regulation. This finding is interesting, because it suggests that parents' infrequent use of the minimization reaction has an ameliorating role for their children with poor emotion regulation, as these children demonstrate more secure attachment to their parents than other children. This finding is similar to the conceptualization of how parents' socialization of their children interacts with the children's individual characteristics, such as emotionality (Bakermans-Kranenburg & van IJzendoorn, 2011; Brumariu, 2015), so that children with poor emotion regulation may have better social relationships than their peers. This includes attachment in a social context, when children experience supportive parenting, for example, low levels of negative parenting (McElwain, Holland, Engle, & Wong, 2012). Further, previous findings have shown that children with poor emotion regulation tend to find ways to establish attachment with their caregiver in a context of flexible, sensitive, and supportive encouragement of emotions (Contreras, Kerns, Weimer, Gentzler, & Tomich, 2000). From this perspective, in this study, children with low scores for emotion regulation were inclined to obtain higher scores for attachment to their parents, when their parents did not minimize their emotional reactions.

Second, we found that when parents used a punitive reaction frequently, children with poor emotion regulation would display a stronger attachment to their parents than children with high emotion regulation. This finding appears contradictory as we found that the combination of a low score for emotion regulation and a high score for parents' punitive response to the children's emotional expression could lead to children's weak attachment to their parents. Our finding requires further exploration for clarity and generalizability.

In addition, an examination of the association between attachment and emotion regulation relies on the cultural context (Brumariu, 2015; Liu & Huang, 2012). From this perspective, Turkish children with poor emotion regulation may not have a negative perception of their parents' punitive approach to their emotion socialization and, thus, they still have a strong attachment to their parents. Researchers have found that in Turkish culture, the children have a positive perception of authoritarian parenting, and this style of parenting has positive associations with children's social outcomes (Kagitcibasi, 2007; Sen, Yavuz-Muren, & Yagmurlu, 2014). Although this finding may appear contradictory, in general, interpretation of findings should be made from the perspective of the interactional model of child development, that is, child-environment interaction (Bronfenbrenner & Morris, 2006). However, we acknowledge that it is difficult to interpret this finding from the point of view of researchers such as Brumariu (2015) and Spinrad et al. (2004). Nevertheless, this finding can be explained by previous researchers who have reported that children can elicit specific approaches from their parents depending upon the children's own characteristics, including their ability to regulate their emotions. The parenting approach that is elicited then influences the children's relationship with their parents (Acar, Torquati, Encinger, & Colgrove, 2017; Kiel & Kalomiris, 2015). From this perspective, it appears from our results that mothers who perceive their children as having poor emotion regulation react punitively to these children's emotional expression. Further, our results show that children with poor emotion regulation may have a tendency to feel they should be close to their mothers (i.e., attached), but as the mothers perceive this closeness to be a negative approach from the children, the mothers react punitively to them. Overall, there is an association between how children approach their parents and how parents respond to the children's emotional expression, depending on the children's ability to regulate their emotions (Kiel & Kalomiris, 2015).

We suggest that cultural context should be considered when interpreting our findings. When culturally oriented characteristics of parenting behavior are considered, the same parenting behavior may have different meanings and responses in different cultures (Sen et al., 2014). Kagitcibasi (2007) argued that as the Turkish cultural context and Turkish family structures are different from those in Western cultures, parenting behavior in Turkey may not have the same meaning for parents and children in the US. For example, Turkish parents show controlling behavior and warmth at the same time, which elicits a positive reaction from their children, whereas this combination of behavior gets a negative reaction from children in the US (Kagitcibasi, 2007). In addition, parents and children may perceive their relationships differently (Lamb, Hwang, Ketterlinus, & Fracasso, 1999). Therefore, inconsistency in the measurement of children's attachment to their parents in a structured environment and their parents' perceptions may lead to our findings.

Our finding that girls had a more secure attachment to their parents than boys is consistent with previous findings. For example, Pierrehumbert, Torrisi, Glatz, Dimitrova, Heinrichs, and Halfon (2009) concluded that as the girls' attachment-related narrations were more secure than those of the boys, and the girls also created more secure attachment representations, their attachment to their parents was more secure than that of the boys. Furthermore, in a study conducted in the US, Szewczyk-Sokolowski, Bost, and Wainwright (2005) found the attachment scores of girls were significantly higher than those of boys. This similar finding of gender differences in attachment reflects that of Turkish researchers who suggest that Turkish parents think that girls need to be protected by, and closer to, their parents more than boys (Kilic, 2013).

We also found that parents in our participant group with a higher socioeconomic status than the others made less harsh and more sensitive responses to their children's negative emotional expression. This finding is congruent with that of previous researchers (e.g., Atay, 2009), whose results showed that families with a lower socioeconomic status meted out disapproval and punishment in response to their children's negative emotions (e.g., anger). This approach negatively influenced the children's psychosocial, cognitive, and physical development. In a study conducted in Turkey, Atay (2009) explored maternal emotion and emotion socialization in early childhood and found that the mothers in families with a lower income had a poorer emotional awareness than their higher socioeconomic status peers, which was predictive of their children's emotional imbalance/ negativity.

There are limitations in this study. First, only parent-reported emotion regulation and parental emotion socialization were used to assess these two constructs. This may create reporter bias and may not represent the full picture of the children's emotion regulation and parental emotion socialization. Therefore, future researchers should assess the parents' report and make independent observations to reflect a wider view of the constructs. Second, our sample size limited the use of more complex models to detect effect sizes. Thus, recruiting a larger sample may enable researchers to use more complex models to examine the constructs in this study. Third, only one researcher implemented the supervision and data collection for the attachment stories with the children. This may have led to reporter bias and lack of interrater reliability. Future researchers may wish employ two or more assessors to administer the supervision and collection of the children's attachment stories.

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14 CHILDREN'S EMOTION REGULATION AND ATTACHMENT

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