



An Investigation of the Relationship Between Mothers' Emotion Expression and Mothers' Report and Child's Self-Report-Based Emotion Regulation

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Abstract

This study aims to investigate whether mothers' emotional expression affects children's emotion regulation and to examine the nature of the congruence between mothers' report-based child emotion regulation and child's self-report-based emotion regulation. The research was conducted with a quantitative research design, specifically a correlational survey model. The study group consisted of a total of 209 primary school students, including 119 girls and 90 boys, and their mothers. Berkeley Emotional Expressivity Questionnaire (BEQ) and Children's Emotion Management Scales: Anger and Sadness/ Child-Parent (CEMS: Anger and Sadness/C-P) forms were used to collect data. The relationships between variables were examined through correlation and regression analysis. The study's findings revealed that the parent form and child form of emotion regulation skills subscales were positively correlated, except for the anger inhibition subscale. The regression analysis demonstrated that child anger dysregulated-expression was predicted by the parent anger dysregulated-expression, parent sadness inhibition, and parent anger inhibition; child anger coping was predicted by the parent joy savoring; child sadness inhibition was predicted by the parent sadness inhibition; child anger dysregulated-expression was predicted by the parent sadness dysregulated-expression; child joy dampening was predicted by the parent anger dysregulated-expression parent sadness inhibition; child joy savoring was predicted by the parent sadness inhibition. When considering gender differences in emotion regulation skills, it was found that girls tended to conceal their anger more but were better at coping with anger, while boys were more likely to express their anger in inappropriate ways.

Key Words

Mother's expression of emotion
Child emotion regulation
Primary school

About Article

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Introduction

Since emotions play a significant role in various essential areas of our lives (e.g., interpersonal relationships, mental health), regulating emotions is essential. Emotions are generally considered beneficial in understanding environmental features, decision-making, adjusting behavioral responses, facilitating social interactions, and enhancing episodic memory, but they can also be harmful when intense (Gross & Thompson, 2007). In such situations, it is emphasized that we need to regulate our emotions (Gross, 1999). Emotion regulation involves internal and external processes that include observation, evaluation, and, especially, modifying emotional responses with intense and transient characteristics to achieve one's goals (Thompson, 1994). Emotion regulation skills have an impact on children's academic achievement during preschool and primary school years (Haskett et al., 2012; Thompson, 1994), emotional expression (Are & Shaffer, 2016), mental health, and social functioning (Bender et al., 2012; Denham & Auerbach, 1995; Perry et al., 2020; Sabatier et al., 2017; Thompson, 1994), as well as social competence (Are & Shaffer, 2016; Arı & Yaban, 2016; Eisenberg et al., 2001; Gülgez, 2018; Haskett et al., 2012; Seçer, 2017; Suarez et al., 2021; Thompson, 1994). However, when children struggle to regulate their emotions, aggression increases (Haskett et al., 2012; Ramsden & Hubbard, 2002), aggressive behaviors emerge (Arı & Yaban, 2016; Schultz et al., 2004; Yurdakul et al., 2021), problem behaviors arise (Arı & Yaban, 2016; Eisenberg et al., 2001; Kara & Sığırtmaç, 2022; Karaş & Altun, 2018; Morris et al., 2007), internalizing problems and existing anxiety levels intensify in children (Ergül, 2019), and various mental health issues worsen (Bender et al., 2012). Suarez et al. (2021) found in their longitudinal study that emotion regulation strategies in early childhood influence the development of future social anxiety. Therefore, it is evident that children's emotion regulation skills significantly impact many vital areas of their lives.

The ability to regulate emotions, which can impact an individual's later life, is believed to develop and shape in the early years within the family environment. Parents serve as models for expressing and regulating emotions by identifying and emphasizing the importance of their children's emotions, thus creating an emotional atmosphere within the home (Are & Shaffer, 2016; Denham & Auerbach, 1995; Eisenberg et al., 2001; Morris et al., 2007; Sarıtaş & Gençöz, 2011; Spinelli et al., 2021; Suarez et al., 2021; Thompson, 1994). They also enable children to develop insight into this area and shape their future emotional lives (Are & Shaffer, 2016; Kara & Sığırtmaç, 2022; Sabatier et al., 2017; Thompson & Meyer, 2007). This is because, at the beginning of life, children cannot regulate their emotions and depend on their parents to meet their physical and emotional needs (Sabatier et al., 2017). As parents' coping socialization improves, their children's emotion regulation skills also increase (Eisenberg et al., 2001; Perry et al., 2020). Another study found that as parental stress levels increase during the COVID-19 pandemic, children struggle more with regulating their emotions (Spinelli et al., 2021).

It has been found that as children's emotion regulation skills improve, their creativity (Uysal & Güven, 2022) and social problem-solving abilities increase (Yükçü, 2017), while their play skills decrease when they struggle to regulate emotions such as anger (Koçyiğit et al., 2015; Yurdakul et al., 2021). Furthermore, studies have shown significant relationships between parents' emotion regulation skills and children's emotion regulation skills and problem behaviors (Arı & Yaban, 2016; Kara & Sığırtmaç, 2022), improvement in children's emotion regulation skills as parents' psychological well-being increases (Karaş & Altun, 2022), weakening of children's emotion regulation skills as stress levels rise (Ergül, 2019; Spinelli et al., 2021), and positive impact of parents displaying a democratic attitude on children's emotion regulation while displaying a strict and harsh attitude has a negative impact on children's emotion regulation (Sarıtaş & Gençöz, 2011; Seçer, 2017; Sille, 2016; Yaman, 2018). In summary, it can be concluded that emotion regulation skills impact many vital areas for children and that the characteristics and behaviors of parents are related to children's emotion regulation skills.

Mothers can create a more suitable emotional climate for their children to learn emotion regulation (Tan & Smith, 2018). In this context, the socialization behaviors of the mother are stated to be influential in the child's emotion regulation (Seçer, 2017; Sille, 2016). Furthermore, the mother's personality traits also impact the child's emotion regulation (Bilge & Sezgin, 2020). Therefore, as mothers' emotional competence, social skills (Sarıtaş & Gençöz, 2011), and emotional literacy increase, the child's emotion regulation skills also improve (Yükçü, 2017). Similarly, when the mother struggles

to regulate her emotions, children also struggle with emotion regulation (Bilge & Sezgin, 2020; Demirkan & Yeşilyaprak, 2022; Sarıtaş & Gençöz, 2011), which can lead to behavioral problems (Koçyiğit et al., 2015) and even affect the child's PTSD symptoms (Powers et al., 2020). The emotional language between the mother and child serves the function of emotion regulation (Denham & Auerbach, 1995), and mothers' expression of emotions is related to children's socio-emotional development (Are & Shaffer, 2016; Perry et al., 2020). Positive emotional expressions by the mother improve the relationship between the mother and child, while excessive negative emotional expressions can harm the child's emotion regulation (Morris et al., 2007; Perry et al., 2020), increase the child's aggression (Haskett et al., 2012; Tan & Smith, 2018), and lead to behavior problems (Eisenberg et al., 2001). Therefore, it can be said that mothers' personality traits, emotional competence, use of emotional language, and the expression of emotions, which are indicators of them, affect children's psychosocial development and mental health.

Based on the analysis conducted, although there are numerous studies in the literature examining the influence of the mother's attitudes, behaviors, and personality traits on children's emotion regulation, no study has been found that investigate influence of the mother's emotional expression on child's emotion regulation. Therefore, this study can contribute to essential findings in this regard. Some research has shown that the mother's emotional expression influences the child's emotion regulation (Eisenberg et al., 2001; Tan & Smith, 2018). However, when we look at studies conducted in our country, in addition to a study concluding that the mother's emotional expression does not significantly affect the child's emotion regulation (Uslu & Turan, 2021), there is also a study indicating that the mother's emotional expression decreases, the child's emotion regulation skills also decrease (Sille, 2016). On the other hand, Are and Shaffer (2016) found in their study that positive emotional expression by mothers positively affects the child's emotion regulation. However, the negative emotional expression does not affect it. Therefore, further research is needed in this area. Furthermore, inconsistencies have been observed in the reports regarding children in the conducted studies (Achenbach et al., 1987; Measelle et al., 2005; Ringoot et al., 2015; Sarıtaş & Gençöz, 2011), and it has been found that when providing information about children who report experiencing negative emotional states, teachers and parents report experiencing less negative emotional states compared to the children (Measelle et al., 2005). For example, mothers who experience difficulties in emotion regulation may overreport their children's emotion dysregulation, indicating that the child experiences less difficulty in emotion regulation than the parent reports (Are & Shaffer, 2016). In addition, discrepancies have been observed between children's and mothers' reports when measuring their coping abilities with anger and sadness, particularly in boys (Gülgez, 2018). In this context, it has been noted that parents may have limited knowledge and awareness of their children's emotional states (Measelle et al., 2005). Therefore, it is considered a limitation of the research to have measurements about the child filled out by a single reporter, and more research should be conducted on the impact of both positive and negative emotional expressions by parents on children (Are & Shaffer, 2016). Thus, it is recommended to use multi-informant data that includes children's observations in the conducted studies (Achenbach et al., 1987; Demirkan & Yeşilyaprak, 2022; Haskett et al., 2012; Ringoot et al., 2015). However, while there have been numerous studies in recent years in our country on emotion regulation between mothers and their preschool children (Arı & Yaban, 2016; Bilge & Sezgin, 2020; Kara & Sığırtmaç, 2022; Karaş & Altun, 2018; Koçyiğit et al., 2015; Seçer, 2017; Sille, 2016; Uslu & Turan, 2021; Yaman, 2018; Yurdakul et al., 2021; Yükçü, 2017), it has been observed that there are far fewer studies conducted with mothers and elementary school children (Demirkan & Yeşilyaprak, 2022; Ergül, 2019; Gülgez, 2018). Upon review, it was found that only the Gülgez (2018) study included the child's report. Due to all these reasons, there is a need for this study to investigate the relationship between mothers' emotional expression and primary school children's emotion regulation abilities based on both the child's self-report and the mother's report.

Method

The research was conducted using a quantitative research design known as the correlational survey model. According to the survey model, the existing situation is presented as it is without changing it. In addition, in the relational survey model, the degree of change between one or more variables is determined (Karasar, 2004). This framework examined the relationship between mothers' emotional

expression and elementary school children's emotion regulation abilities based on the child's self-report and the mother's report.

Study group

The study group of the research consists of 209 primary school students, including 119 girls and 90 boys, who volunteered to participate, as well as their mothers. Attention was paid to the fact that the study participants were between the ages of 9-10. Emotion Management Scales: Anger, Sadness and Joy / Child-Parent (CEMS: Anger, Sadness and Joy /C-P) forms were administered to the children and their mothers. The scale was applied in face-to-face interviews with 50 mothers, while 203 surveys were sent home to others. However, all children were interviewed face-to-face. Although data were collected from 253 children, the data from 44 students were not included in the research due to missing or incomplete data from their mothers. The results demographics information in Table 1.

Table 1. Table of demographic data

	Group	N	Percent
Child Age	8-9 ages	152	72.8
	10-11 ages	57	27.2
	Total	209	100.0
Child Gender	Girl	119	56.9
	Boy	90	43.1
	Total	209	100.0
Mother Age	20-30 ages	31	14.8
	31-39 ages	125	59.8
	40 ages and above	53	25.4
	Total	209	100.0
Mother Education Status	Primary and Secondary School	108	51.7
	High School	80	38.3
	Higher Education	21	10.0
	Total	209	100.0

Data Collection Process

Using the Pearson correlation coefficient and regression analysis, this study examined the relationships between mothers' emotional expression and child emotion regulation skills based on parent and child reports. Additionally, t-tests were conducted to determine if there were significant differences in emotion regulation skills based on gender. Emotion Management Scales: Anger, Sadness and Joy / Child-Parent (CEMS: Anger, Sadness and Joy /C-P) forms were administered to the children and their mothers. Mothers filled in their children's emotional state in these forms. Before regression analysis, the obtained data were examined regarding regression assumptions, and data that violated the regression assumptions were removed from the dataset. In this regard, after calculating Mahalanobis distance values, 7 data points that disrupted normal distribution were excluded from the dataset. The results regarding normal distribution and regression assumptions are presented in Table 2.

Table 2. Results of Regression Analysis Assumptions

	N	Min.	Max.	Mean	SD	Skew.	Kurt.
Positive Expressivity	202	4.00	28.00	21.67	5.03	-1.208	1.627
Negative Expressivity	202	9.00	39.00	25.25	5.12	.044	.385
Impulse Strength	202	7.00	42.00	31.04	7.19	-1.066	1.068
Parent Anger Inhibition	202	4.00	11.00	6.46	1.69	.295	-.563
Parent Anger Dysregulated-Expression	202	3.00	9.00	4.92	1.42	.468	-.211
Parent Anger Coping	202	4.00	12.00	8.07	1.85	-.088	-.275
Parent Sadness Inhibition	202	4.00	12.00	6.39	1.94	.509	-.465
Parent Sadness Dysregulated-Expression	202	3.00	9.00	6.48	1.54	-.124	-.602
Parent Sadness Coping	202	4.00	12.00	7.82	1.83	.299	-.282
Parent Joy Dampening	202	5.00	11.00	6.19	1.47	1.376	1.561
Parent Joy Savoring	202	9.00	15.00	13.50	1.61	-1.105	.573
Child Anger Inhibition	202	4.00	12.00	7.56	1.99	.366	-.410
Child Anger Dysregulated-Expression	202	3.00	9.00	4.72	1.50	.535	-.642
Child Anger Coping	202	4.00	12.00	8.53	2.07	-.063	-.751
Child Sadness Inhibition	202	4.00	12.00	7.69	2.12	.084	-.620
Child Sadness Dysregulated-Expression	202	3.00	9.00	5.55	1.52	.050	-.613
Child Sadness Coping	202	4.00	12.00	8.31	2.11	.024	-.888
Child Joy Dampening	202	6.00	18.00	9.98	2.67	.373	-.331
Child Joy Savoring	202	5.00	15.00	11.66	2.11	-.716	.405

Data Collection Tool

The Berkeley Expressivity Questionnaire (BEQ): Developed by Gross and John (1995) and adapted into Turkish by Akın (2011), this scale consists of 16 items and is based on a 7-point Likert-type scale (1=strongly disagree, 2=disagree, 3=sometimes disagree, 4=undecided, 5=sometimes agree, 6=agree, 7=strongly agree). The scale utilizes self-reporting and encompasses three dimensions. Items 3, 8, and 9 are reverse-coded. The Turkish adaptation study by Akın (2011) examined the scale's validity through exploratory and confirmatory factor analysis. The analysis results indicated that the scale consists of 16 items divided into three factors that account for 58% of the total variance. Factor loadings ranged from .53 to .90. Regarding reliability, internal consistency reliability coefficients for the scale ranged from .74 to .84, while test-retest reliability coefficients ranged from .67 to .81.

Children's Emotion Management Scales: Anger and Sadness/ Child-Parent (CEMS: Anger and Sadness/C-P): The scale measures children's emotion regulation skills and consists of child and parent forms. The original child forms of the scale were developed by Zeman et al. (2001), the parent forms were developed by Perry-Parrish et al. (2005) (as cited in Cassano et al., 2007), and they were adapted into Turkish by Gülgez and Gündüz (2019). The "anger" scale consists of 11 items, and the "sadness" scale consists of 12 items, with three subscales: Inhibition, Dysregulated-Expression, and Coping. The scale features a 3-point Likert-type rating (1=hardly ever, 2=sometimes, 3=often). The child form is completed by the child themselves, while the parent completes the parent form. There are no reverse-coded items in the scales. The factor loadings of the "Anger Management Scale" child form range from .32 to .70, and the whole item error variance range from .51 to .90. The reliability findings for the three subscales reveal Cronbach's alpha internal consistency coefficients of .54, .60, and .70, and test-retest correlation coefficients of .60, .62, and .71, respectively. The factor loadings of the "Sadness Management Scale" child form range from .14 to .56, and the total item error variance ranges from .24 to .65. The reliability findings for the three subscales reveal Cronbach's alpha internal consistency coefficients of .70, .58, and .61, and test-retest correlation coefficients of .69, .60, and .64, respectively. The factor loadings of the "Anger Management Scale" parent form range from .43 to .74, and the total item error variance ranges from 0.45 to 0.82. The reliability findings for the three subscales reveal Cronbach's alpha internal consistency coefficients of .70, .68, and .77, and test-retest correlation coefficients of .71, .68, and .74, respectively. The factor loadings of the "Sadness Management Scale" parent form range from .46 to .83, and the total item error variance ranges from .31 to .79. The reliability

findings for the three subscales reveal Cronbach's alpha internal consistency coefficients of .70, .58, .69, and test-retest correlation coefficients of .72, .65, and .74, respectively. Children Joy Management Scales (CJMS) were developed by Gülgez and Gündüz (2019). The factor loadings of the Joy Management Scale child form range from .38 to .79, explaining 46% of the total variance with a two-factor structure consisting of 11 items. The reliability findings for the two subscales reveal Cronbach's alpha internal consistency coefficients of .73 and .65, and test-retest correlation coefficients of .71 and .67, respectively. The factor loadings of the Joy Management Scale parent form range from .21 to .77, explaining 44% of the total variance with a two-factor structure consisting of 10 items. The reliability findings for the two subscales reveal Cronbach's alpha internal consistency coefficients of .64 and .72, and test-retest correlation coefficients of .69 and .70, respectively.

Findings

The relationships between dependent and independent variables in the study were examined by correlation analysis, and the findings obtained are given in Table 3.

Table 3. Correlation Analysis Results

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	
1: PE	1																			
2: NE	.27**	1																		
3: IS	.70**	.16*	1																	
4: PAI	-.07	-.09	-.01	1																
5: PADE	-.07	-.04	.02	-.19**	1															
6: PAC	.04	.07	-.07	.39**	-.42**	1														
7: PSI	-.22**	-.17*	-.04	.44**	-.03	.14	1													
8: PSDE	.05	.01	.14*	-.08	.39**	-.19**	-.05	1												
9: PSC	-.02	.06	-.11	.28**	-.37**	.53**	.19**	-.37**	1											
10: PJD	-.11	.00	-.02	.14*	.16*	-.05	.33**	.05	-.03	1										
11: PJS	.15*	.17*	.12	-.10	-.16*	.06	-.22**	.07	.04	-.34**	1									
12: CAI	-.04	.08	-.01	.12	.04	.09	.07	.11	-.01	.07	.00	1								
13: CADE	-.10	.02	-.06	-.12	.19**	-.06	.11	-.03	-.07	.04	-.13	-.13	1							
14: CAC	.05	.12	.02	.04	-.15*	.15*	-.10	.01	.09	-.09	.19**	.48**	-.35**	1						
15: CSI	.01	-.06	.03	.06	.02	-.05	.21**	-.02	-.01	.06	-.06	.37**	.027	.09	1					
16: CSDE	-.02	.01	.02	-.00	.04	.06	-.01	.25**	-.09	.00	.10	.08	.18*	-.03	-.08	1				
17: CSC	.08	.03	.06	.18**	-.17*	.19**	.14*	-.13	.20**	-.12	.12	.32**	-.27**	.48**	.27**	-.17*	1			
18: CJD	-.07	.04	.03	.02	.27**	-.12	.27**	.10	-.11	.21**	-.09	.16*	.31**	-.14*	.35**	.06	-.04	1		
19: CJS	.08	.05	.00	.01	-.26**	.21**	-.19**	-.01	.13	-.12	.22**	.17*	-.26**	.34**	-.06	.20**	.14*	-.28**	1	

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

Note: PE: Positive Expressivity, NE: Negative Expressivity, IS: Impulse Strength, PAI: Parent Anger Inhibition, PADE: Parent Anger Dysregulated-Expression, PAC: Parent Anger Coping, PSI: Parent Sadness Inhibition, PSDE: Parent Sadness Dysregulated-Expression, PSC: Parent Sadness Coping, PJD: Parent Joy Dampening, PJS: Parent Joy Savoring, CAI: Child Anger Inhibition, CADE: Child Anger Dysregulated-Expression, CAC: Child Anger Coping, CSI: Child Sadness Inhibition, CSDE: Child Sadness Dysregulated-Expression, CSC: Child Sadness Coping, CJD: Child Joy Dampening, CJS: Child Joy Savoring

In Table 2, when examining the relationship between parents' reports of their child's emotion regulation and the child's self-reported emotion regulation, the following statistically significant positive correlations were observed: between parent anger dysregulated-expression and child anger dysregulated-expression ($r = .19$), between parent anger coping and child anger coping ($r = .15$), between parent sadness inhibition and child sadness inhibition ($r = .21$), between parent sadness dysregulated-expression and child sadness dysregulated-expression ($r = .25$), between parent sadness coping and child sadness coping ($r = .20$), between parent joy dampening and child joy dampening ($r = .21$), and between parent joy savoring and child joy savoring ($r = .22$). When examining the relationship between parental emotional expression and child emotion regulation, the following statistically significant correlations were observed: negative association between positive expressivity and parent

sadness inhibition ($r = -.22$), positive association between positive expressivity and parent joy savoring ($r = .15$), negative association between negative expressivity and parent sadness inhibition ($r = -.17$), positive association between negative expressivity and parent joy savoring ($r = .17$), and positive association between impulse strength and parent sadness dysregulated-expression ($r = .14$). These correlations were found to be statistically significant in both positive and negative directions.

The results of the regression analysis to determine whether the child's emotion regulation predicts the parent reporting measuring the child's emotion regulation are presented in Table 4.

Table 4. The Results of Regression Analysis

Dependent Variable	Independent Variables	Unstandardized Coefficients		Standardized Coefficients	t	p	VIF	Adjusted R ²
		B	Std. Error	β				
Model 1								
CAI	(Constant)	3.910	2.055		1.903	.059		
	PAI	.116	.100	.098	1.154	.250	1.457	
	PADE	.062	.120	.044	.520	.604	1.460	
	PAC	.119	.098	.110	1.213	.227	1.663	
	PSI	.015	.086	.015	.177	.859	1.408	.002
	PSDE	.136	.105	.105	1.304	.194	1.308	
	PSC	-.045	.097	-.041	-.462	.645	1.602	
	PJD	.080	.107	.059	.743	.459	1.252	
	PJS	.038	.096	.031	.400	.690	1.195	
Model 2								
CADE	(Constant)	5.622	1.504		3.738	.000		
	PAI	-.171	.073	-.193	-2.338	.020	1.457	
	PADE	.230	.088	.217	2.618	.010	1.460	
	PAC	.081	.072	.099	1.119	.264	1.663	
	PSI	.148	.063	.190	2.340	.020	1.408	.058
	PSDE	-.117	.077	-.120	-1.532	.127	1.308	
	PSC	-.055	.071	-.066	-.766	.444	1.602	
	PJD	-.054	.078	-.053	-.687	.493	1.252	
	PJS	-.074	.070	-.079	-1.058	.291	1.195	
Model 3								
CAC	(Constant)	5.289	2.090		2.530	.012		
	PAI	.043	.102	.035	.420	.675	1.457	
	PADE	-.144	.122	-.099	-1.182	.238	1.460	
	PAC	.114	.100	.102	1.144	.254	1.663	
	PSI	-.108	.088	-.102	-1.235	.218	1.408	.035
	PSDE	.080	.106	.060	.751	.454	1.308	
	PSC	.025	.099	.022	.255	.799	1.602	
	PJD	.013	.109	.009	.116	.908	1.252	
	PJS	.196	.097	.153	2.017	.045	1.195	
Model 4								
CSI	(Constant)	7.785	2.168		3.591	.000		
	PAI	-.015	.106	-.012	-.144	.885	1.457	
	PADE	-.010	.127	-.007	-.083	.934	1.460	
	PAC	-.092	.104	-.080	-.887	.376	1.663	
	PSI	.259	.091	.236	2.844	.005	1.408	.014
	PSDE	-.038	.110	-.027	-.343	.732	1.308	
	PSC	-.021	.103	-.018	-.203	.840	1.602	
	PJD	-.039	.113	-.027	-.349	.728	1.252	
	PJS	-.015	.101	-.012	-.152	.880	1.195	

Table 4. The Results of Regression Analysis (Continued)

Dependent Variable	Independent Variables	Unstandardized Coefficients		Standardized Coefficients	t	p	VIF	Adjusted R ²
		B	Std. Error	β				
Model 5								
CSDE	(Constant)	2.484	1.529		1.624	.106		
	PAI	-.022	.075	-.025	-.298	.766	1.457	
	PADE	-.026	.089	-.024	-.294	.769	1.460	
	PAC	.121	.073	.147	1.656	.099	1.663	
	PSI	.021	.064	.027	.334	.739	1.408	.049
	PSDE	.242	.078	.245	3.110	.002	1.308	
	PSC	-.079	.072	-.095	-1.094	.275	1.602	
	PJD	.024	.080	.023	.296	.767	1.252	
	PJS	.084	.071	.088	1.176	.241	1.195	
Model 6								
CSC	(Constant)	5.317	2.103		2.528	.012		
	PAI	.130	.103	.105	1.272	.205	1.457	
	PADE	-.037	.123	-.025	-.302	.763	1.460	
	PAC	.066	.101	.058	.656	.512	1.663	
	PSI	.145	.088	.133	1.642	.102	1.408	.068
	PSDE	-.100	.107	-.073	-.931	.353	1.308	
	PSC	.082	.100	.071	.819	.414	1.602	
	PJD	-.179	.110	-.125	-1.635	.104	1.252	
	PJS	.147	.098	.112	1.505	.134	1.195	
Model 7								
CJD	(Constant)	4.614	2.559		1.803	.073		
	PAI	-.089	.125	-.057	-.717	.474	1.457	
	PADE	.441	.149	.234	2.949	.004	1.460	
	PAC	-.007	.122	-.005	-.061	.951	1.663	
	PSI	.407	.107	.296	3.793	.000	1.408	.132
	PSDE	-.018	.130	-.010	-.137	.891	1.308	
	PSC	-.100	.121	-.069	-.827	.409	1.602	
	PJD	.177	.133	.098	1.329	.185	1.252	
	PJS	.077	.119	.046	.647	.519	1.195	
Model 8								
CJS	(Constant)	9.242	2.044		4.521	.000		
	PAI	.008	.100	.007	.084	.933	1.457	
	PADE	-.324	.119	-.217	-2.711	.007	1.460	
	PAC	.142	.098	.124	1.449	.149	1.663	
	PSI	-.217	.086	-.199	-2.535	.012	1.408	.119
	PSDE	.140	.104	.102	1.349	.179	1.308	
	PSC	.066	.097	.057	.680	.497	1.602	
	PJD	.049	.107	.034	.456	.649	1.252	
	PJS	.183	.095	.140	1.930	.055	1.195	

Note: PE: Positive Expressivity, NE: Negative Expressivity, IS: Impulse Strength, PAI: Parent Anger Inhibition, PADE: Parent Anger Dysregulated-Expression, PAC: Parent Anger Coping, PSI: Parent Sadness Inhibition, PSDE: Parent Sadness Dysregulated-Expression, PSC: Parent Sadness Coping, PJD: Parent Joy Dampening, PJS: Parent Joy Savoring, CAI: Child Anger Inhibition, CADE: Child Anger Dysregulated-Expression, CAC: Child Anger Coping, CSI: Child Sadness Inhibition, CSDE: Child Sadness Dysregulated-Expression, CSC: Child Sadness Coping, CJD: Child Joy Dampening, CJS: Child Joy Savoring

As seen in Table 3, child anger dysregulated-expression is predicted by parent anger inhibition ($\beta=-.193$), parent anger dysregulated-expression ($\beta=.217$), and parent sadness inhibition ($\beta=.190$). Child anger coping predicted by parent joy savoring ($\beta=.153$). Child sadness inhibition is predicted by parent sadness inhibition ($\beta=.236$). Child sadness dysregulated-expression predicted by parent sadness

dysregulated-expression ($\beta = .245$). Child joy dampening was predicted by parent anger dysregulated expression ($\beta = .234$) and parent sadness inhibition ($\beta = .296$). Child joy savoring is predicted by parent anger dysregulated expression ($\beta = -.217$) and parent sadness inhibition ($\beta = -.199$). Examining Table 3, it can conclude that parent sadness inhibition predicts child joy savoring, child joy dampening, child sadness inhibition, and child anger dysregulated expression.

Differences According to the Gender

Whether children's emotion regulation skills differed significantly in gender was examined with the independent sample t-test and the obtained finding is presented in Table 5.

Table 5. T-Test Result on Examination of Emotion Regulation Skills by Gender

	Levene Test		t-test mean difference			Group Statistics			
	<i>F</i>	<i>p</i>	<i>t</i>	<i>df</i>	<i>p</i>	Gender	<i>N</i>	Mean	<i>SD</i>
Parent anger inhibition	1.223	.270	-.377	200	.706	Female	115	6.43	1.75
						Male	87	6.52	1.63
Parent anger dysregulated-expression	.578	.448	-.032	200	.974	Female	115	4.91	1.46
						Male	87	4.92	1.36
Parent anger coping	.092	.761	-.459	200	.647	Female	115	8.02	1.84
						Male	87	8.12	1.86
Parent sadness inhibition	.817	.367	-1.470	200	.143	Female	115	6.22	1.85
						Male	87	6.62	2.04
Parent sadness dysregulated-expression	.205	.651	1.087	200	.278	Female	115	6.58	1.56
						Male	87	6.34	1.51
Parent sadness coping	.407	.524	-1.240	200	.216	Female	115	7.68	1.87
						Male	87	8.00	1.76
Parent joy dampening	.572	.450	.421	200	.674	Female	115	6.23	1.49
						Male	87	6.14	1.46
Parent joy savoring	.320	.572	.788	200	.432	Female	115	13.58	1.58
						Male	87	13.40	1.65
Child anger inhibition	6.914	.009	2.014	200	.045	Female	115	7.81	1.79
						Male	87	7.24	2.20
Child anger dysregulated-expression	1.036	.310	-2.149	200	.033	Female	115	4.52	1.52
						Male	87	4.97	1.45
Child anger coping	.460	.498	2.015	200	.045	Female	115	8.78	1.95
						Male	87	8.19	2.17
Child sadness inhibition	.033	.855	-.076	200	.940	Female	115	7.68	2.12
						Male	87	7.70	2.13
Child sadness dysregulated-expression	3.847	.051	1.955	200	.052	Female	115	5.73	1.40
						Male	87	5.31	1.64
Child sadness coping	2.051	.154	.449	200	.654	Female	115	8.36	2.02
						Male	87	8.23	2.24
Child joy dampening	1.633	.203	1.134	200	.258	Female	115	10.16	2.83
						Male	87	9.73	2.43
Child joy savoring	1.420	.235	2.011	200	.046	Female	115	11.92	2.01
						Male	87	11.32	2.21

When examining the gender differences in children's emotion regulation skills, Table 3 indicates statistically significant differences based on gender. Specifically, in the "anger inhibition" subscale of the child form of the Emotion Management Scale, there was a significant difference based on children's gender ($t = 2.014$; $p > .05$), indicating that females (mean score: 7.81 ± 1.79) had higher scores than males

(mean score: 7.24 ± 2.20). Similarly, in the “anger dysregulated-expression” subscale of the child form of the Emotion Management Scale, there was a significant difference based on children's gender ($t = -2.149$; $p > .05$), indicating that males (mean score: 4.97 ± 1.45) had higher scores than females (mean score: 4.52 ± 1.52). Furthermore, in the “anger coping” subscale of the child form of the Emotion Management Scale, there was a significant difference based on children's gender ($t = 2.015$; $p > .05$), indicating that females (mean score: 8.78 ± 1.95) had higher scores than males (mean score: 8.19 ± 2.17).

Discussion

This study examined the relationship between a child's emotion regulation and the mother's emotional expression and the concordance between parental and child reports in measuring children's emotion regulation skills was explored. The research findings indicate that as mothers' positive emotional expression increases, children are less likely to inhibit their sadness and are more capable of experiencing joy. These results are consistent with the literature that demonstrates the positive contribution of positive emotional expressions by mothers to their children (Are & Shaffer, 2016; Eisenberg et al., 2001; Sille, 2016; Tan & Smith, 2019). This outcome is expected since previous studies have suggested that a mother's positive emotional expressivity would positively impact a child's expression and regulation of emotions (Eisenberg et al., 2001). Furthermore, as mothers expressed their negative emotions in this study, children's inhibition of sadness decreased, and they could savor feelings of joy more. Therefore, mothers' expressions of negative and positive emotions led to the same effect. In a study conducted by Are and Shaffer (2016), no significant relationship was found between a mother's expression of negative emotions and a child's emotion regulation, and some studies have even found a negative association between a mother's expression of negative emotions and a child's emotion regulation (Eisenberg et al., 2001; Seçer, 2017). However, it is believed that the term “negative emotional expressivity” in these cases refers more to the adverse emotional reactions directed at the child rather than the expression of negative emotions per se. Eisenberg and colleagues (2001) have suggested that expressing a certain level of negative emotions by the mother may have advantages in regulating a child's emotions. In some studies, positive correlations have been found between mothers' positive emotional expressivity and negative emotional expressivity (Haskett et al., 2012; Ramsden & Hubbard, 2002), and positive correlations have been observed between a mother's negative emotional expressions and a child's emotion regulation (Haskett et al., 2012), which supports the obtained results. Furthermore, the literature suggests that mild to moderate levels of negative emotional expressions can assist children in learning emotion regulation (Morris et al., 2007). Therefore, it can be considered an expected and consistent result with the literature that a mother's expression of her positive or negative emotions contributes positively to a child's ability to express their sadness more comfortably, experience joy more fully, and regulate their emotions. As mothers express their emotions, it creates a positive atmosphere where children can express their emotions more freely (Denham & Auerbach, 1995). Another finding is that an increase in a mother's impulse strength, i.e., uncontrollable intense emotions, leads to the child's inability to cope appropriately with sadness. This result is consistent with the abovementioned studies (Eisenberg et al., 2001; Ramsden & Hubbard, 2002; Tan & Smith, 2018). It is believed that this situation arises because children are negatively affected by mothers who cannot regulate their own emotions effectively in terms of emotion regulation. Indeed, mothers serve as models for their children in emotion regulation (Denham & Auerbach, 1995; Morris et al., 2007). The findings indicate that when mothers appropriately express their emotions, children can better regulate their emotions without inhibition, while inappropriate expression of emotions can harm a child's emotional well-being.

In this study, it was observed that all subscales of the parent form and child form of the Emotion Regulation Scale, except for the “anger inhibition” subscale, were positively and significantly correlated. This finding is consistent with the study conducted by Gülgez (2018). While many researchers agree that using multiple sources to measure children's emotion regulation skills eliminates bias issues, few studies have obtained reports from children and their teachers or parents. In the context of the results, it can be said that mothers and children agree on how children express their emotions. It is believed that this result is due to the greater attention mothers of young children in our country paid to their children's emotional state and their increased observations in this regard. Furthermore, in the “anger inhibition” and “sadness inhibition” subscales, children reported more difficulties coping than

their mothers, indicating that they tended to conceal their struggling emotions more and reported better coping with anger and sadness. Some studies have also shown that children report more difficulties in emotion regulation compared to their parents (Measelle et al., 2005; Ringoot et al., 2015; Sarıtaş & Gençöz, 2011).

Additionally, in the literature, it has been noted that 9-year-old children are more likely to receive positive responses for emotions such as joy in social situations. At the same time, anger and sadness are associated with emotions that need to be controlled and may be seen as shameful (Pons et al., 2004). In this study, which mostly involved 9-10-year-old children, the children reporting better coping with anger and sadness than their mothers may be due to their embarrassment in expressing their anger and sadness and their concern about being accepted by others.

Literature suggests that emotion regulation can vary based on the environment (Thompson, 1994), culture, and gender (Aldao, 2013; Bender et al., 2012; Morris et al., 2007). It has been noted that girls experience more anxiety (Bender et al., 2012) and are better at regulating their emotions than boys (Morris et al., 2007). However, in this study, it was found that there was no difference in emotion regulation skills based on gender, which differs from other studies that have concluded the same (Arı & Yaban, 2016; Ergül, 2019; Seçer, 2017; Yaman, 2018; Yükcü, 2017). Instead, it was found that girls tend to conceal their anger more but cope with anger better, while boys tend to express their anger in inappropriate ways. According to Aldao (2013), girls express sadness and joy more, while boys exhibit stronger and angrier reactions. Therefore, this finding is consistent with the literature and some other studies (Bilge & Sezgin, 2020; Gülgez, 2018; Haskett et al., 2012; Uysal & Güven, 2022; Yurdakul et al., 2021). On the other hand, when examining the difference in regulating sadness and joy between boys and girls, no significant difference was found, similar to the findings of Gülgez (2018). These results indicate that in our society, while anger experienced by boys is more socially accepted and the angry responses exhibited by girls may be seen as odd, this gender-based learning does not apply to sadness and happiness emotions.

Morris and colleagues (2007) have stated that children's emotional development is influenced by their families, schools, peers, and culture. However, when investigating the impact of parental emotional socialization behaviors on children's emotional regulation, it has been argued that mothers and fathers should be included in the study (Haskett et al., 2012). In this sense, when measuring children's emotion regulation skills, obtaining reports from mothers, fathers, and teachers can create multidimensional data and yield richer results.

One of the research findings was that a mother's uncontrolled emotional expression increases a child's feelings of sadness. Based on this, it is believed that the mother's excessive and uncontrolled displays of emotions can harm the child. Therefore, it is recommended that mothers participate in education and courses to enhance emotional control, engage in various exercises, and attend individual or group counseling programs. Additionally, as demonstrated in the study by Denham and Auerbach (1995), reading stories and engaging in games can also help develop emotional language between mothers and children.

The study conducted by Schultz and colleagues (2004) found that children with high levels of happiness learn more from their experiences and have higher levels of empathy. In this study, children were found to rate the emotion of joy higher compared to other emotions. Therefore, it was also observed that the sub-scale of joy dampening, which is part of joy emotion regulation, received high scores. In this context, exploring why children cannot experience and express joy can lead to developing recommendations to address the underlying factors.

It has been noted that besides a mother's emotional expressions, her cognitive processes and cultural and economic factors also influence a child's emotional regulation (Perry et al., 2020). Thus, when studying children's emotional regulation, research can be conducted that encompasses a mother's emotional expression, cognitive processes, personal characteristics, and psychological resilience. Additionally, conducting this study across different cultures can yield different results.

This research, conducted with 3rd and 4th-grade primary school students, can provide richer data if conducted across different age groups or in a cross-sectional study from early childhood to

adolescence. Indeed, it has been found that the emotional expressions used by mothers have different effects on different age groups (Denham & Auerbach, 1995).

Despite the contributions of this study to the literature on emotional expression and emotion regulation, there are some limitations. More data is needed to be considered a limitation of the research. Additionally, conducting the study only in the provinces of Düzce and Sakarya can also be seen as a limitation. Despite all these limitations, this study can shed light on many studies focusing on children's emotion regulation and maternal emotional expression. Specifically, when measuring children's emotion regulation skills, it is essential to consider the thoughts of mothers who may know them best and have witnessed their experiences and compare these thoughts with the children's perceptions on the subject. Furthermore, by obtaining data from multiple sources, an attempt has been made to make the research more objective. Additionally, this study is vital in revealing how a mother's expression of emotions affects a child's emotion regulation skills. It is one of the few studies conducted on this topic in our country. Considering that many studies on children's emotion regulation skills in Türkiye are conducted with preschool children, this study conducted with primary school children is also significant. In this context, it can strengthen the parent-child relationship and make adjustments that contribute to the child's emotional development for parents and individuals who play essential roles in the child's life.

Conflicts of Interest

The authors declare that they have no conflict of interest.

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Data Availability

The datasets generated during and/or analysed during the current study are available from the corresponding author on reasonable request.

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