



KADIR HAS UNIVERSITY  
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**YOUNG CHILDREN'S EMOTION REGULATION  
SKILLS: THE ROLE OF MOTHERS' PARENTING  
STRESS AND REACTIONS TO CHILDREN'S EMOTIONS**

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STRESS AND REACTIONS TO CHILDREN'S EMOTIONS**

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Submitted to the School of Graduate Studies of Kadir Has University  
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## APPROVAL

This thesis titled YOUNG CHILDREN'S EMOTION REGULATION SKILLS: THE ROLE OF MOTHERS' PARENTING STRESS AND REACTIONS TO CHILDREN'S EMOTIONS submitted by GİZEM AKEL GÜÇLÜ, in partial fulfillment of the requirements for the degree of Master of Arts in Psychological Sciences is approved by

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In addition, I acknowledge that any claim of irregularity that may arise in relation to this work will result in a disciplinary action in accordance with the university legislation.

Gizem Akel Güçlü

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12/06/2023



*To my dearest husband Talha Güçlü...*

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YOUNG CHILDREN'S EMOTION REGULATION SKILLS: THE ROLE OF  
MOTHERS' PARENTING STRESS AND REACTIONS TO CHILDREN'S  
EMOTIONS

**ABSTRACT**

Early years of life play a crucial role in the development of emotion regulation skills, which are associated with concurrent and later socio-cognitive achievements. Parents' supportive and non-supportive reactions to their children's negative emotions help children to develop emotion regulation skills. Certain parent-related characteristics such as depression and stress can influence parental reactions. This influence can also be present in the association between parenting stress and young children's emotion regulation skills. However, only a few studies have addressed the relationship between parenting stress and children's emotion regulation skills, and none of them investigated the mediating role of parental reactions in this association. In the present study, we aimed to investigate whether parents' supportive and non-supportive reactions have a mediating role between parenting stress and young children's emotion regulation skills. For this purpose, we collected data from children aged between 2 and 4 and their mothers and assessed mothers' reactions through both an observational paradigm and self-report. We elicited negative emotions from children by using the Disappointing Gift Paradigm (Cole, 1986) and videotaped how mothers reacted to their children's negative emotions. We complemented the observational data with self-report assessments of parenting stress (Parenting Stress Scale; Özmen & Özmen, 2012), children's emotion regulation skills (the Emotion Regulation Checklist; Batum & Yağmurlu, 2007; Shields & Cicchetti, 1997), and parental responses to children's negative emotions (Coping with Children's Negative Emotions Scale; Fabes et al., 1990; Yağmurlu & Altan, 2009). A mediation model fit to the data indicated that parenting stress and mothers' reactions were both related to children's emotion regulation difficulties. However, the relation between parenting stress and children's emotion regulation was not mediated via mothers' reactions to children's negative emotions. Overall, the present study provides evidence



for a deepened understanding of the relationship between parenting stress, maternal reactions, and children's emotion regulation skills.

**Keywords: emotion regulation, early childhood, parental supportive reactions, parental non-supportive reactions, emotion socialization**



KÜÇÜK ÇOCUKLARIN DUYGU DÜZENLEME BECERİLERİ: ANNELERİN  
EBEVEYNLİK STRESİNİN ROLÜ VE ÇOCUKLARIN DUYGULARINA  
TEPKİLERİ

**ÖZET**

Yaşamın ilk yılları, eş zamanlı ve sonraki sosyo-bilişsel başarılarla ilişkili olan duygu düzenleme becerilerinin gelişiminde önemli bir rol oynamaktadır. Ebeveynlerin çocuklarının olumsuz duygularına verdikleri destekleyici ve destekleyici olmayan tepkiler, çocukların duygu düzenleme becerilerini geliştirmelerine yardımcı olmaktadır. Depresyon ve stres gibi ebeveynle ilgili bazı özellikler, ebeveynlerin çocuklarına yönelik tepkilerini etkileyebilir. Bu etki, ebeveynlik stresi ile çocukların duygu düzenleme becerileri arasındaki ilişkiye aracılık edebilir. Ancak, ebeveynlik stresi ile çocukların duygu düzenleme becerileri arasındaki ilişkiyi ele alan az sayıda çalışma vardır ve bunların hiçbiri ebeveynlerin çocuklarının duygularına verdikleri tepkilerin aracılık rolünü araştırmamıştır. Bu çalışmada, ebeveynlik stresi ile çocukların duygu düzenleme becerileri arasındaki ilişkide ebeveynlerin çocuklarının olumsuz duygularına verdikleri destekleyici ve destekleyici olmayan tepkilerin aracılık rolünü araştırmak amaçlanmıştır. Bu amaçla, yaşları 2 ila 4 arasında değişen çocuklardan ve annelerinden veri toplandı ve annelerin çocuklarının olumsuz duygularına verdikleri tepkileri gözlemsel bir görev aracılığıyla değerlendirilmiştir. Hayal Kırıklığı Yaratan Hediye Görevi (Cole, 1986) kullanılarak çocuklarda olumsuz duygular ortaya çıkarılmış ve annelerin çocuklarının olumsuz duygularına nasıl tepki verdikleri videoya kaydedilmiştir. Gözlemsel verilere ek olarak, anneler ebeveynlik stresi (Ebeveynlik Stres Ölçeği; Özmen ve Özmen, 2012), çocukların duygu düzenleme becerileri (Duygu Düzenleme Kontrol Listesi; Batum ve Yağmurlu, 2007; Shields ve Cicchetti, 1997) ve çocukların olumsuz duygularına ebeveyn tepkileri (Çocukların Olumsuz Duygularıyla Başa Çıkma Ölçeği; Fabes vd., 1990; Yağmurlu ve Altan, 2009) anketlerini tamamlamıştır. Araştırmanın bulguları, ebeveynlik stresinin ve annelerin çocukların olumsuz duygularına verdikleri tepkilerin her ikisinin de çocukların duygu düzenleme güçlükleri ile ilişkili olduğunu göstermiştir. Ancak, ebeveynlik stresi ve çocukların duygu düzenlemesi arasındaki ilişki, annelerin çocukların

olumsuz duygularına verdikleri tepkiler aracılığıyla ortaya çıkmamıştır. Sonuç olarak, bu çalışma ebeveynlik stresi, annelerin çocukların olumsuz duygularına verdikleri tepkiler ve çocukların duygu düzenleme becerileri arasındaki ilişkinin daha iyi anlaşılmasına yönelik bulgular sunmaktadır.

**Anahtar Sözcükler: duygu düzenleme, erken çocukluk, ebeveyn destekleyici tepkileri, ebeveyn destekleyici olmayan tepkileri, duygu sosyalleşmesi**



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## LIST OF SYMBOLS

$\beta$	Standardized regression coefficient
$B$	The regression coefficient (unstandardized)
$F$	F-ratio
$p$	Probability, p-value
$R^2$	The proportion of data explained by the model
$r_s$	Spearman's correlation coefficient





## 1. INTRODUCTION

Emotion regulation is an intentional or automatic strategy used to deal with positive or negative emotions, and to adjust the duration and intensity of emotional reactions, allowing individuals to effectively address the demands of various situations in a manner that aligns with social norms and sufficient flexibility (Cole et al., 2018; Garner & Hinton, 2010; Gross & Thompson, 2007). Emotion regulation is a crucial adaptive skill that requires the control of emotions to achieve personal goals such as hiding disappointing or staying calm when angry (Stifter & Augustine, 2019). This process is characterized as the capacity to voluntarily delay one's own emotional reactions whenever necessary (Cole & Deater-Deckard, 2009). Processes related to emotion regulation can be internal or external: Among internal processes, there are attention and memory, whereas among external processes, there are internalized social expectations such as initiating, maintaining, and regulating emotions in relation to personal goals (Cole et al., 1994; Gyurak et al., 2011; Thompson, 1994). The development of emotion regulation is a complex, multidimensional, biopsychosocial, and interpersonal process that spans the years from infancy to adulthood (Cole et al., 1994, 2004; Eisenberg et al., 2001; Roque & Veríssimo, 2011). Early years of life have a significant role in the development of emotion regulation skills (Cole et al., 2009). Emotion regulation skills in early years are associated with later socio-cognitive achievements such as social competence, peer acceptance, and academic competence (Calkins et al., 1999; Fabes et al., 2002; Feng, 2008; Gross, 2014). Furthermore, emotion regulation difficulties have been shown to be linked with behavioral problems including externalizing and internalizing problems (Cole et al., 2003; Feng, 2008).

There are various child-related factors that are related to the development of emotion regulation such as child temperament and cognitive skills (Eisenberg & Morris, 2002). On the other hand, children also build their emotion regulation skills on external influences such as their family, school, neighborhood, peers, and culture (Cole, 2014; Morris et al., 2007; Thompson, 2011). Family, in particular, plays an essential role in emotion regulation development. Parents' emotion socialization practices, particularly,

parental reactions toward their children's negative emotions are crucial for the development of children's emotion regulation. Parents may react supportively or non-supportively toward their children's emotions (e.g., Altan-Aytun et al., 2013; Cassano et al., 2007; Cole et al., 1994; Shaffer et al., 2011). Parents' supportive reactions such as using useful strategies to make their children feel better are associated with children's adaptive emotional development and positive emotional functioning outcomes (McDowell et al., 2002; Shaffer et al., 2012). On the other hand, parents' non-supportive reactions such as minimization or devaluing their children's emotions are associated with poor and inappropriate emotion regulation strategies and socio-emotional development (Ang et al., 2008; Crnic et al., 2005; Eisenberg et al., 1992; Jones et al., 2002; Morgan et al., 2002; Shaffer et al., 2011; Wu et al., 2019).

Parental reactions to children's emotions are shaped by parent-related characteristics such as depression and mental health (Morris et al., 2007). For instance, Silk et al. (2011) demonstrated that mothers with depression histories are more inclined to show less supportive reactions to their young children's negative emotions. Moreover, parenting stress, in other words, the distress that parents experience when the parenting demands are perceived as high and exceed the available resources (Abidin, 1995; Özmen & Özmen, 2012), may influence non-supportive maternal reactions and maladaptive parenting practices as well. Parenting stress is known to be associated with dysfunctional parenting behaviors and parent-child interactions (Crnic et al., 2005; Hu et al., 2019; Shaffer et al., 2011). Parenting stress can limit parents' ability to socialize children's emotions in a supportive way (Mackler et al., 2015). This limited capacity for supportive emotion socialization due to parenting stress may result in poorer development of emotional regulation in children. Up to this day, only a handful of studies have addressed the associations between parenting stress and children's emotion regulation skills. Since this relationship is still not widely understood, we aim to investigate the mediator role of parents' reactions to children's emotions between parenting stress and children's emotion regulation skills. Understanding this relationship is essential to inform parents about the potential consequences of parenting stress and to prepare prevention and intervention studies.

## **2. LITERATURE REVIEW**

### **2.1 Emotion Regulation in Early Childhood**

The development of emotion regulation is a gradual and continuous progress that allows individuals to learn about regulatory processes throughout the lifespan (Cole et al., 2004; Eisenberg & Morris, 2003; Gross & Thompson, 2007; Thompson & Goodman, 2010; Zeman et al., 2006). The capacity of children to regulate their emotions starts to develop during the early stages of their lives (Cole et al., 1994). In infancy, the parents have the main role in their infants' emotion regulation processes (Thompson, 1994). The period of toddlerhood is an important phase of emotional, cognitive, and motor growth that enables children to transit from depending on their parents to more independent forms of emotion regulation (Premo et al., 2014). In addition, at approximately 3 years old, children are expected to regulate their emotions in accordance with social rules and context (Planalp et al., 2022). Hence, toddlerhood is an essential period of emotion regulation development. Specifically, between the ages of 3 and 6, children achieve significant milestones in acquiring effective strategies and skills for regulating their emotions (Calkins & Hill, 2007). In these years, children learn to cope with emotional circumstances autonomously through using different emotion regulation strategies and their selection of emotion regulation patterns can stabilize in the following years (Ratcliff et al., 2021). During preschool years, children's social networks expand through preschool attendance with peers and teachers, thus, children obtain a variety of information about different emotions and learn to display various emotional expressions and reactions to accomplish social goals in the preschool (Cole et al., 1994). Children also acquire knowledge about the use of distraction techniques, such as engaging in play and singing, to manage negative emotions (Dennis & Kelemen, 2009). During the preschool years, there is a noteworthy importance placed on the cognitive and language development of children, which is closely linked with the progression of their emotion regulation abilities (Bradley, 1990). In the preschool period, difficulties in emotion regulation skills are related to poor social relations and adaptation problems (Eisenberg et al., 2010). Hence, the development of effective emotion regulation skills is particularly

regarded as critical for children's socioemotional functioning in early childhood. (Calkins & Hill, 2007; Silk et al., 2006; Suveg & Zeman, 2004; Shaffer et al., 2011).

In sum, early childhood years are essential to develop emotion regulation skills with parental support serving as an essential factor. Also, the development of emotion regulation during these early years has significant implications for both immediate and long-term developmental outcomes. Considering the significance of emotion regulation development, it is notably essential to comprehend the potential factors that are related to children's emotion regulation skills to foster their positive emotion regulation development and inhibit maladaptive or deficient development in this domain.

## **2.2 How Parenting Influences Children's Emotion Regulation Skills**

As outlined by Morris et al. (2007)'s tripartite model of family influence on children's emotion regulation and adjustment, children's ability to regulate their emotions is thought to be influenced by three key processes: observation, the emotional atmosphere within the family, and parenting practices. First, *observation* is an essential way for children to learn about specific emotional behaviors (Morris et al., 2007). Parents act as models and demonstrate to their children appropriate, acceptable, and expected emotional reactions, expressions, and ways to manage emotions. Conversely, when parents demonstrate elevated levels of anger towards their children while experiencing negative emotions, this may lead to children's learning about ineffective emotion regulation reactions (Morris et al., 2007). Second, *the family's emotional climate*, which reflects the strength of the parent-child attachment, the dynamics of marital relationships, parenting style, and family emotion expressivity influences children's emotion regulation skills. Children's emotional competence will be poor if the family's emotional climate is negative (Cummings & Davies, 1996). Finally, emotion-related *parenting practices* have an essential role in the growth of children's emotion regulation skills. Parents display various practices associated with emotion regulation, including their responses to their children's emotions, the use of emotion-coaching techniques (such as recognizing and labeling their child's emotions and showing empathy), providing encouragement and guidance in managing emotions, and teaching various strategies for emotion regulation.

Although there are multiple approaches through which parents can impact the development of their children's emotion regulation skills, parents' *emotion socialization* is one of the most important methods (Eisenberg et al., 1998). Emotion socialization refers to how parents respond to their children's emotions and the way they communicate with them when their children experience negative emotions like fear, anxiety, worry, and sadness (Eisenberg et al., 1998; Halberstadt, 1991). The way parents respond to their children's emotions is considered one of the key aspects of emotion socialization (Eisenberg et al., 1998) since these provide essential information for children, enabling them to learn effective strategies for coping with emotional experiences and displaying appropriate emotional expressions (Morris et al., 2007; Nelson et al., 2009; Price & Kiel, 2022).

Younger children are generally unable to manage negative emotions like sadness and anger; hence, the way parents respond to their children's negative emotions becomes crucial in assisting children in developing the ability to cope with and regulate these challenging emotions (Nelson et al., 2009; Ramsden & Hubbard, 2002). Parents may display either *supportive* or *non-supportive* reactions when faced with their children's negative emotions (Eisenberg et al., 1998; Fabes et al., 2002; Nelson et al., 2009). Supportive reactions from parents have been found to be linked to various social-emotional skills in children, including social competence, coping abilities, and emotion regulation (Gentzler et al., 2015; Seddon et al., 2020; Ramakrishnan et al., 2019). For example, a longitudinal study revealed that when mothers reacted supportively to their 5-year-old children's negative emotions, it was associated with better emotion regulation abilities and better adjustment skills when the children reached the age of 15 (Perry et al., 2020). Supportive reactions consist of providing expressive encouragement, employing strategies focused on emotions, and utilizing problem-focused reactions (Fabes et al., 2002; Shaffer et al., 2011). *Expressive encouragement reactions* reflect parents' encouragement and validation behaviors to support their children to express and experience negative emotions (e.g., letting children know that it is acceptable to express their emotions through crying when they are feeling unhappy). *Emotion-focused reactions* reflect parents' useful strategies to help their children to feel better when they experience negative emotions (e.g., distracting the child by talking about happy

moments). *Problem-focused reactions* reflect parents' support and contribution to solving their children's problems that cause negative feelings and distress (e.g., helping children to generate new ideas about potential locations they haven't checked yet when they misplace their toys) (Boyd-Soisson, 2002). Parents who display supportive reactions create a comfortable emotional climate for their children to explore and express their emotions and this comfortable environment contributes to adaptive emotional development and positive emotional functioning outcomes for children (Eisenberg et al., 1996; McDowell et al., 2002; Shaffer et al., 2011).

On the contrary, parents may display non-supportive reactions such as displaying distress, punishing, and minimizing their children's emotions (Fabes et al., 2002; O'Neal & Magai, 2005; Price & Kiel, 2022). Parents' non-supportive reactions are associated with poorer emotion regulation abilities in children (Eisenberg & Fabes, 1994). For instance, a cross-sectional study conducted on children aged 8 to 11 years revealed that those who experience higher levels of non-supportive reactions from their mothers exhibit more difficulties with emotion regulation (Sanders et al., 2015). *Distress reactions* reflect that if children display negative emotions, their parents feel distressed when they react to their children's emotions (e.g., experience frustration or upset when children cry). It is important to note that although other dimensions of parental reactions primarily evaluate parents' specific behaviors related to the socialization of their children's emotions, parents' distress reactions are primarily concerned with the parents' own emotional states rather than their children's emotional states. *Punitive reactions* reflect parents' punitive behaviors and responses when they deal with their children's negative emotions (e.g., telling children that's what happens when they are not careful). *Minimization reactions* reflect parents' minimization or devaluation responses to their children's negative feelings, problems, or distress experiences (e.g., telling children they are overreacting) (Boyd-Soisson, 2002). Parents who display such non-supportive reactions lead to an uncomfortable environment for children because these reactions lead children to think that expression of those negative emotions is inappropriate or unacceptable. (Nelson et al., 2009). Punitive, distress and minimizing parental reactions heighten children's emotional arousal, prevent children from expressing their emotions in an appropriate way (Morris et al., 2007), and lead to poor and inadequate emotion regulation strategies and

socio-emotional development for children (Eisenberg & Fabes, 1994; Morelen & Suveg, 2012; Ramsden & Hubbard, 2002; Shaffer et al., 2011; Jones et al., 2002).

To sum up, parents' engaging in appropriate and supportive reactions to their children's negative emotions foster children's socio-emotional skills, specifically their ability to regulate their emotions effectively; conversely, non-supportive reactions lead to poor and inappropriate socio-emotional consequences (Denham & Grout, 1992; Fabes et al., 2001; Morelen & Suveg, 2012; McElwain et al., 2007; Nelson et al., 2009; Shaffer et al., 2011).

### **2.3 Parenting Stress and Parental Reactions to Children's Emotions**

Parents' reactions to their children's negative emotions can diminish or foster children's social and emotional outcomes. While studies emphasize the significance of parental reactions to children's emotions for their socio-emotional abilities, they generally fail to provide a comprehensive explanation for the variations observed in the ways of parental reactions. Therefore, it is notably crucial to comprehend the factors that can lead to these variations and shape the ways of parental reactions. Parent-related (i.e., depression), child-related (i.e., temperament), and contextual factors (i.e., marital relationship and socioeconomic status) have a role in parental reactions (Eisenberg et al., 2020; Eisenberg & Fabes, 1994). Earlier studies that generally focus on psychopathological symptoms (e.g., psychological distress, stress, anxiety, and depression) have yielded that these symptoms play a significant role in emotion socialization strategies – parental reactions in particular (Bertie et al., 2021; Carreras et al., 2019; Nelson et al., 2009; Ponnet et al., 2012). The negative impact of depression on parents' reactions to children's emotions often reveals itself in the difficulty parents experience with regulating their own emotions (Silk et al., 2006). This emotion regulation difficulty can lead to problems with their emotion socialization by jeopardizing the capacity of parents to teach, model for, or reinforce in their children adaptive emotional expressions (Frick & Morris, 2004; Hajal & Paley, 2020; Silk et al., 2006). Therefore, depressed parents are less likely to react to their children's emotional expressions, and when they do, they are more likely to react with negative and non-supportive reactions compared to non-depressed parents (Morris et al., 2007).

Another psychopathological symptom that is associated with parents' emotion socialization practices is stress. Higher stress is related to more negative parenting behaviors (e.g., lower responsiveness and warmth, harsh discipline, and rejecting behavior) and a lower capacity to socialize children's emotions in a supportive way (Bertie et al., 2021; Crnic et al., 2005; Hu et al., 2019; Pinderhughes et al., 2000; Planalp et al., 2022; Shaffer et al., 2011). Previous studies revealed that a higher likelihood of displaying non-supportive reactions, in particular, punitive reactions in parents with elevated levels of stress (Bertie et al., 2021; Nelson et al., 2009; Pinderhughes et al., 2000).

In addition to depression and stress, psychological distress of parents and family stress have been reported to be associated with parents' emotion socialization practices. A recent study has demonstrated an association between parents' psychological distress and harsh parenting behaviors and punitive responses toward their children (Carreras et al., 2019). Family stress, as a more complex construct comprising various stress factors such as marital dissatisfaction, home chaos, and job dissatisfaction, has been linked to more negative parental reactions. As the family stress parents experience increases, their likelihood of displaying more supportive reactions to their children's negative emotions tends to decrease (Nelson et al., 2009).

Abidin's comprehensive model (1990) explains the determinants of parenting stress and suggests that parental factors (i.e., parent's psychopathological symptoms) and situational factors (i.e., marital satisfaction and family stress) contribute to higher levels of parenting stress. Also, a systematic review based on Abidin's model reported that higher levels of maternal anxiety and depression have an essential role in the construction of higher levels of parenting stress (Fang et al., 2022). These negative psychopathological and situational circumstances can lead to increased challenges in their parenting role and diminish parents' capacity to establish and sustain high-quality parent-child interactions. Therefore, these parents may tend to exhibit dysfunctional parenting practices (Abidin, 1992; Avenevoli & Merikangas, 2006; Cooklin et al., 2012).



Taken together, the reviewed evidence suggests that parents' psychopathological symptoms and family stress can shape parental reactions toward children's emotions. In addition, these psychopathological symptoms contribute to higher levels of parenting stress. Hence, parenting stress seems to stand as a plausible candidate factor influencing parents' emotion socialization practices. Although the significant role that parenting stress plays in parents' interactions with their children has been acknowledged in the literature (Abidin, 1992; Babore et al., 2014; Fang et al., 2022; Trumello et al., 2020), there is limited knowledge regarding the role of parenting stress in parents' reactions to their children's negative emotions. Since, parenting stress departs from other life stressors, such as work stress or marital dissatisfaction, with its close relation to raising children, it may have a greater role in both parenting behaviors and children's developmental outcomes than other sources of stress (Fang et al., 2022; Holly et al., 2019; de Maat et al., 2021; Ponnet et al., 2012). Given that parenting stress can negatively impact the parents' ability to socialize their children's emotions in a supportive way (Mackler et al., 2015), enhancing our understanding of the role of parenting stress on parental reactions is needed and crucial.

#### **2.4 Parenting Stress and Children's Emotion Regulation**

Parents generally display normative levels of parenting stress, however, some parents can have extreme levels of stress that are associated with children's social-emotional outcomes including behavioral problems, adjustment problems, and social competence (Anthony et al., 2005; Crnic et al., 2005; Deater-Deckard, 1998; Dennis et al., 2018; Fang et al., 2022; Kim & Doh, 2004; Neece et al., 2012; Planalp et al., 2022; Trumello et al., 2021). It is known that these developmental outcomes are also related to children's emotion regulation skills such that being able to control their emotions when they are disappointed (Cole et al., 1996; Hill et al., 2006; Mirabile et al., 2013). It can be argued that one way for parenting stress to impact child development is through children's emotion regulation skills.

There are limited studies that investigate the associations between parenting stress and children's emotion regulation skills (Chazan-Cohen et al., 2009; Mathis & Bierman,

2015; Planalp et al., 2022; Spinelli et al., 2020). These studies argued that parents with elevated levels of parenting stress may be inclined to display maladaptive emotion regulation strategies toward their children both by affective contagion (i.e., exposing their children to intense emotional distress leading to influencing children's mood negatively) and by modeling dysfunctional coping strategies that hinder the teaching of effective and functional emotion regulation coping strategies (Mathis & Bierman, 2015). Furthermore, parenting stress can lead to more worries and irritability for parents which can activate their children's stress response system. Children's exposure to these factors may influence their self-regulatory abilities negatively (Blair, 2002). In sum, parenting stress can have a role in shaping the development of emotion regulation skills through different mechanisms.

Some studies show links between parenting stress and children's emotion regulation skills. A longitudinal study showed that elevated levels of parenting stress at 14 months were significantly associated with poorer observed emotion regulation abilities at 5 years of age (Chazan-Cohen et al., 2009). A cross-sectional study by Mathis and Bierman (2015) further reported an association between parenting stress and 4-year-old children's emotion regulation skills measured with parental reports in a low-SES sample. Another longitudinal study demonstrated that children of adolescent mothers with high parenting stress at 12 months are inclined to have higher observed regulatory problems at 18 months (Planalp et al., 2022). Finally, Spinelli et al. (2020) found that higher parenting stress was associated with more emotional problems skills in children aged between 2 and 14 during the COVID-19 lockdown. Although these studies demonstrate a link between parenting stress and emotion regulation, they are not without limitations. Most of these studies used parental reports leading to lower ecological validity. Mathis and Bierman (2015) focused only on low-SES participants, Planalp et al. (2022) had mothers from a demographic risk group (i.e., adolescent and low-educated mothers) as participants and Spinelli et al. (2020) carried out during COVID-19 lockdown so that the findings of these studies may not be highly generalizable.

## **2.5 The Mediator Role of Parents' Reactions to Their Children's Negative Emotions**

Although a limited number of studies show links between parenting stress and children's emotion regulation skills, specific mechanisms underlying these direct and indirect relations have not been fully explained, leading to unresolved questions. Based on Morris's Tripartite Model (2007), parental characteristics such as parenting stress influence parenting practices such as parental reactions and parenting practices have an impact on children's emotion regulation development. Considering that parenting stress is likely to have indirect impacts on children's emotion regulation skills (Baumrind et al., 2005); it may be associated with children's emotion regulation skills indirectly by increasing parental non-supportive reactions. It can be suggested that parental supportive and non-supportive reactions mediate the relationship between parenting stress and children's emotion regulation skills since parental reactions are related to both parenting stress and children's emotion regulation skills. The mediator role of parent's reactions to children's emotions between parenting stress and children's emotion regulation has not yet been investigated. Moreover, although only a few studies have addressed the links between parenting stress and children's emotion regulation skills; the mechanisms related to these associations remain unclear. Given the provided information, further research is necessary to enhance our comprehension of the direct and indirect connections that accurately depict the link between parenting stress and children's emotion regulation abilities. Understanding these direct and indirect relations is crucial to inform parents about the consequences of parenting stress on children's emotional development and preparing appropriate prevention and intervention programs.

## **2.6 The Present Study**

In the light of theoretical and empirical foundations, this study aims to investigate the mediator role of the mothers' reactions to their children's negative emotions in the relationship between parenting stress and children's emotion regulation skills. Since, most studies that explored these relations relied on self-report measures, which are subject to response biases and may not truly reflect the behaviors parents would employ in naturalistic settings (McMahon & Naragon-Gainey, 2020), the present study uses both

an observational setting and parental self-report to answer the research questions of the study. Therefore; in the present study, we conducted an observational study and aimed to answer the following questions: (1) Are mothers' reactions to their children's negative emotions related to parenting stress and children's emotion regulation skills, (2) Is there a relationship between mothers' self-reported and observed reactions toward their children's negative emotions?, and (3) Do mothers' reactions to their children's negative emotions mediate the relationship between parenting stress and children's emotion regulation skills? As presented in Figure 2.1 and Figure 2.2, our hypotheses were as follows:

**Hypothesis 1:** There will be a negative relationship between parenting stress and mothers' supportive reactions to children's negative emotions.

**Hypothesis 2:** There will be a positive relationship between parenting stress and mothers' non-supportive reactions to children's negative emotions.

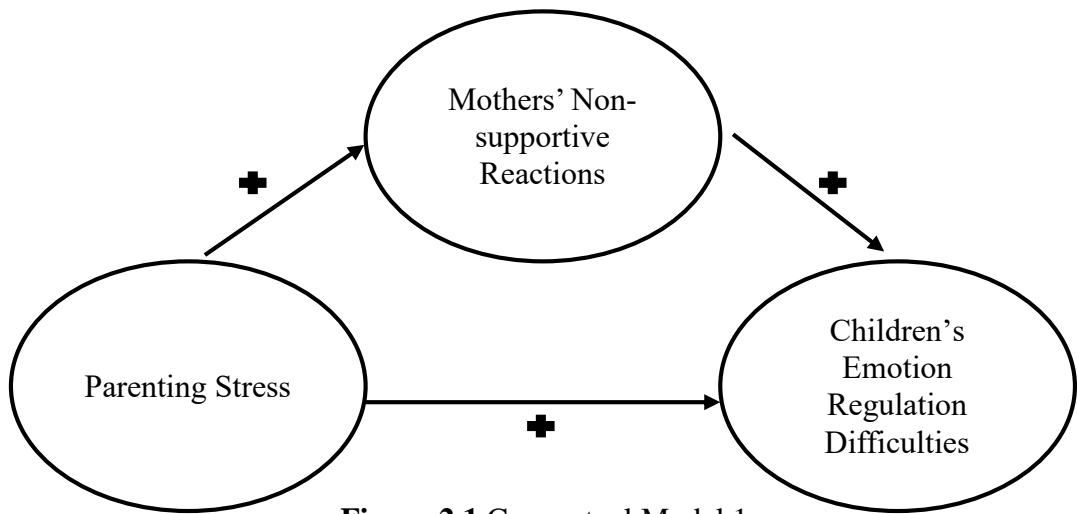
**Hypothesis 3:** There will be a positive relationship between mothers' supportive reactions and children's emotion regulation skills.

**Hypothesis 4:** There will be a positive relationship between mothers' non-supportive reactions and children's emotion regulation difficulties.

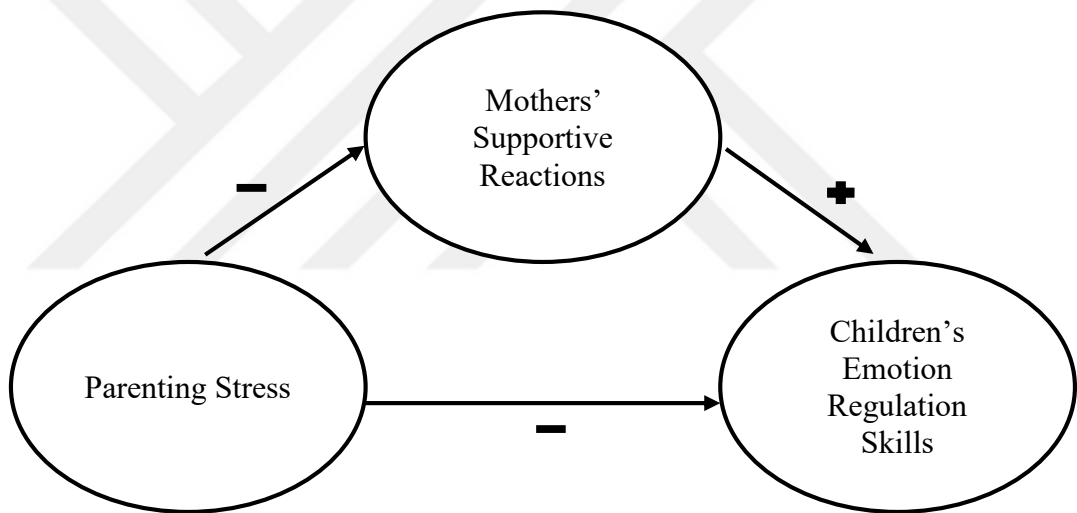
**Hypothesis 5:** There will be a positive relationship between parenting stress and children's emotion regulation difficulties.

**Hypothesis 6:** There will be a positive relationship between observed and self-reported maternal reactions.

**Hypothesis 7:** Mothers' supportive and non-supportive reactions to children's negative emotions will mediate the relationship between parenting stress and children's emotion regulation skills.



**Figure 2.1** Conceptual Model 1



**Figure 2.2** Conceptual Model 2

### 3. METHOD

#### 3.1 Participants

Data were collected from 50 mother-child dyads. Two dyads were excluded due to children having an autism diagnosis. The final sample included 48 typically developing children (24 girls; *age range* = 25 - 59 months,  $M(SD) = 40.4 (8.75)$ ) and their mothers. Mothers' socio-economic status (SES) was indexed by mothers' education, occupation, and income. See Table 3.1 for detailed demographics.

**Table 3.1** Participants' Demographic Information ( $N = 48$ )

	%	M	SD	Range
<b>Child Characteristics</b>				
Sex				
Girls	50			
Boys	50			
Age (in months)		40.4	8.75	24 - 59
<b>Mother Characteristics</b>				
Education		1.89	.55	0 - 3
Primary and Secondary School	2.1			
High School	14.6			
Undergraduate	75			
Master's and Doctorate	8.3			
Employment		.25	.44	0 - 1
Employed	25			
Unemployed	75			
Income		3.85	.92	1 - 5
2200 and below	2.1			
2200 – 4015 TL	2.1			
4015 – 5700 TL	31.3			
5700 – 8090 TL	37.5			
8090 – 14470 TL	27.1			
SES Index		6	1.33	4 - 5

**Table 3.2** Descriptive Statistics for Study Variables (*N* = 48)

	M	SD	Minimum	Maximum	Skewness	Kurtosis
1. Mothers' Self-Reported Supportive Reactions	4.27	.39	3.36	5.00	-.47	.09
Emotion-Focused Reactions	4.22	.51	2.92	5.00	-.66	.16
Problem-Focused Reactions	4.27	.44	2.83	5.00	-.73	1.27
Expressive Encouragement Reactions	4.34	.48	3.08	5.00	-.74	.10
2. Mothers' Self-Reported Non-Supportive Reactions	1.72	.32	1.22	2.57	1.17	1.83
Distress Reactions	2.12	.38	1.50	3.10	.47	-.14
Punitive Reactions	1.22	.32	.93	2.07	1.70	3.02
Minimization Reactions	1.82	.48	1.00	3.00	.86	.59
3. Mothers' Observed Supportive Reactions	3.21	1.74	.00	7.00	.65	.43
Emotion-Focused Reactions	.83	.91	.00	3.00	.71	-.63
Problem-Focused Reactions	1.85	1.00	.00	3.00	-.66	-.51
Expressive Encouragement Reactions	.53	.78	.00	3.00	1.37	1.13
4. Mothers' Observed Non-Supportive Reactions	.39	.71	.00	2.00	1.59	.34
Distress Reactions	.26	.61	.00	2.00	2.14	3.33

	Punitive Reactions	.00	.00	.00	.00	-	-
	Minimization Reactions	.13	.45	.00	2.00	2.96	8.16
5.	Children's Emotion Dysregulation	2.05	.35	1.18	2.91	.18	.12
6.	Children's Emotion Regulation	3.20	.38	2.38	4.00	-.25	.04
7.	Parenting Stress	1.93	.39	1.31	2.69	.18	-1.32
8.	Children's Negative Emotions	3.87	2.59	.00	9.00	.12	-.99
9.	Children's Positive Emotions	1	1.61	.00	5.00	1.46	.71

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## 3.2 Materials and Procedure

Participants were reached through social media and invited to the laboratory for participation. Each adult participant was provided with an informed consent form briefly explaining the purpose and requirements at each step of the study. After a lab session appointment was made for the mothers, the questionnaires were sent one day before they came to the lab and they were asked to complete them before coming to the study. First, mothers were asked to fill out an online form via Qualtrics which included the Parenting Stress Scale, Coping with Children's Negative Emotions Scale, Emotion Regulation Checklist, and Demographic Information Form. It took an average of 60 minutes for the mothers to complete the online form.

In the lab session, mothers were verbally informed again about the purpose and the requirements at each step of the study. Afterward, the Disappointing Gift Paradigm was used to elicit negative emotions from children and observe parents' reactions to those negative emotions. The whole session lasted approximately 60 minutes. In the end, mothers were debriefed about the purpose of the study and received a gift card and a book to thank them for their participation in the study.

### 3.2.1 Disappointing gift paradigm

In this task, each child first completed a *gift ranking* phase, in which the child was presented with six objects and asked to rank these objects from the most desired to least desired. These six objects consisted of attractive (e.g., toy car, cooking toy, play dough, surprise egg toy) and unattractive (e.g., clothespin, bottle cap, and broken comb) toys and objects. The experimenter noted the most and least desired objects and removed all the toys and objects from the table. Children were told that they would win the most desired object as a prize after completing the upcoming tasks<sup>1</sup>. After the tasks were completed,

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<sup>1</sup> Within the scope of another study investigating the mediator role of maternal behaviors in the relationship between parenting stress and self-regulation skills, children completed self-regulation tasks (e.g., the Balance Beam Task; Roth, 1991), and mother-child dyads engaged in free play for 5 minutes with eight toys such as a cooking toy, toy car, animals, ball, baby doll, fishing toy, and repair set. During the

the experimenter told the child that she will now wrap the prize and asked the child to sit and wait with their mothers while the prize was being gift-wrapped for them. After, the experimenter started video recording and wrapped the least desired object behind a separator while making sounds to arouse the child's curiosity and desire for the prize. After gift-wrapping was over, the experimenter gave the child her least favorite object as a gift and left the room to answer an alleged phone call before the child started unwrapping the gift. After the experimenter left the room, the child and the mother were left alone in the room for two minutes and their interactions in this interval were videotaped. At the end of the interval, the experimenter entered the room, admitted that she made a mistake, apologized for it, and gave the child the object that the child ranked as the most desired one to ensure that the child would not leave the lab in a negative mood. This ended the second and last part of the study, which lasted for approximately 20 minutes.

### **3.2.2 Parenting stress**

Parenting stress was measured via the Parenting Stress Scale developed by Özmen and Özmen (2012) in Turkish (see Appendix A). The scale consists of 16 items, which mothers were asked to rate on a four-point Likert scale from 1 (never) to 4 (always). Higher scores reflect higher parenting stress. The original study reported good internal consistency (Cronbach's alpha = .85), similar to what was found in the present study (Cronbach's alpha = .83). A total score was computed and used in the analyses.

### **3.2.3 Coping with children's negative emotions scale**

To assess mothers' reactions to children's negative emotions, the Turkish adaptation (Yağmurlu & Altan, 2009) of the Coping with Children's Negative Emotions Scale (Fabes et al., 1990) was used (see Appendix B). This scale consists of twelve scenarios depicting situations where their children experienced negative emotions such as anger,

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administration of self-regulation tasks, mothers filled out the Parenting Stress Scale, Perceived Stress Scale, Emotion Regulation Checklist, and demographic form on Qualtrics behind a separator.

sadness, fear, nervousness, and disappointing. Each scenario was presented with six items corresponding to two main types of parental reactions; either supportive (i.e., expressive encouragement reactions, problem-focused reactions, emotion-focused reactions) and non-supportive reactions (i.e., distress reactions, punitive reactions, minimizing reactions).

Among supportive reactions, ‘problem-focused responses’ refer to the parents’ support to help their children find solutions to the root of their negative emotion (for example, thinking of different places to look for a lost item). ‘Emotion-focused responses’ refer to parents’ actions to provide comfort and support to their child in order to alleviate their negative emotions. (e.g., “comforting the child and trying to make them feel better”). Lastly, ‘expressive-encouragement’ responses refer to parents’ attempts to encourage their children to express their emotions (for example, their embarrassment).

Among non-supportive reactions, ‘minimization reactions’ refer to the parents’ tendency to undervalue their children’s emotional reactions (for example, telling the child to stop overreacting and behaving like a baby). ‘Punitive reactions’ refer to the parents’ reactions to their child’s emotional expression in the forms of verbal or physical punishment (for example, telling the child that they will not be allowed to go out unless they stop). ‘Distress reactions’ refer to the parents’ reactions involving distress (for example, telling the child that they felt themselves uneasy and embarrassed).

Mothers rated each of the twelve scenarios for their likelihood of responding in six different ways using a 5-point Likert-type scale from 1 (*I never do this*) to 5 (*I absolutely do this*). The Turkish adaptation of the scale reported good internal consistency for both supportive reactions (Cronbach’s alpha = .84) and non-supportive reactions (Cronbach’s alpha = .87). In the present study, the internal consistency of supportive reactions was similarly high (Cronbach’s alpha = .83; alpha values for expressive encouragement responses, problem-focused responses, and emotion-focused reactions were .80, .85, and .85, respectively) whereas that of non-supportive reactions was lower (Cronbach’s alpha = .76; alpha values for minimization reactions, punitive reactions, and distress reactions were .78, .82, and .68, respectively). As done in the previous studies (Altan-Aytun et al.,

2013; Yagmurlu & Altan, 2009), we computed total scores for each factor, supportive and non-supportive reactions, and used them in the analyses.

### **3.2.4 Emotion regulation checklist**

To measure children's emotion regulation skills, the Turkish adaptation (Batum & Yağmurlu, 2007) of the Emotion Regulation Checklist (Shields & Cicchetti, 1997) was used (see Appendix C). This inventory has been widely used with diverse samples (e.g., in Turkey, Batum & Yağmurlu, 2007; in Germany, Bandon et al., 2008; in Spain, Seguin-Lemire et al., 2017). Mothers were asked to rate 24 items on a 4-point Likert-type scale from 1 (never) to 4 (almost always). There are two subscales, namely, emotion regulation and lability-negativity. The former reflects socially appropriate emotional displays (e.g., 'Can say when s/he is feeling sad, angry or mad, fearful or afraid') whereas the latter depicts arousal, anger dysregulation, and mood lability (e.g., 'Exhibits wide mood swings'). We considered both subscales for the analysis. Higher scores on the subscale of emotion regulation indicate higher levels of emotion regulation whereas higher scores on the subscale of lability-negativity indicate higher levels of emotion regulation difficulties. The Turkish adaptation of the scale reported good internal consistency for the composite score computed with both factors (Cronbach's alpha = .75). The original study conducted by Shields and Cicchetti (1997) reported high internal consistency for both factors (Cronbach's alpha values for emotion regulation and lability/negativity were .83 and .96, respectively). The internal consistency in the present study was lower for both factors (Cronbach's alpha values were .65 and .63, respectively). Such relatively low alpha values were not uncommon in the studies that previously used this scale (.59/.66 in Bandon et al., 2008, and .72/.71 in Orta et al., 2013).

### **3.2.5 Demographic information**

A demographic information form was created and used to collect data regarding participants' demographic information, such as the child's age and sex, household income, parents' level of education, and current employment (see Appendix D). The SES index was calculated based on the education level, employment status, and income level of the participants (Berzofsky et al., 2014).



## 4. DATA CODING

### 4.1 Observed Maternal Reactions to Children's Negative Emotions

To measure the way parents respond to their children's emotions, we expanded a scale that was previously developed to rate mothers' reactions to children's emotions (Boyd-Soisson, 2002). In Boyd-Soisson (2002), four reactions of mothers were coded; these were sensitive/supportive reactions, distress reactions, punishing reactions, and minimizing reactions. For the present study, we further included the coding of different types of supportive reactions such as expressive encouragement and emotion-focused and problem-focused reactions (see Appendix E). Thus, parallel to the Coping with Children's Negative Emotions Scale, the present coding scheme includes six parental reactions: supportive reactions (i.e., expressive encouragement, emotion-focused and problem-focused reactions) and non-supportive reactions (i.e., distress, punishing, and minimizing reactions). Mothers' reactions to children's emotions were rated on a scale from 0 (*never observed*) to 1 (*constantly observed*) using 2-min mother-child interaction video recordings. Two coders coded 10% of the data to provide interrater reliability which indicates good consistency (Intraclass correlation coefficient = .95). See detailed information in Appendix E.

### 4.2 Children's Emotions

Children's negative and positive emotions were coded to understand whether children showed negative emotions in response to the disappointing gift paradigm. Based on a prior study (Tobin et al., 2011), children's negative and positive emotions were coded from the 30-second interval following the receipt of an undesirable gift. Two coders rated the display of negative emotions by using a 2-point Likert-type scale (0: *never displays negative/positive emotion*, 1: *constantly displays negative/positive emotions*). Two coders coded 10% of the data to provide interrater reliability which indicates good consistency for both negative and positive emotions (Intraclass correlation coefficient = .93 and .95 respectively) (See Appendix F).

## 5. RESULTS

### 5.1 Data Analysis

Jamovi Version 1.6 (The Jamovi Project, 2021) was used to analyze the data. Hierarchical regression analysis and mediation analysis by using Hayes' (2022) PROCESS macro was conducted in R (RStudio Team, 2016). Prior to performing primary analyses, the presence of missing data, distribution of the data, and outliers were examined. We identified five outliers (i.e., mean  $\pm$  3\*SD) and they were removed from the mediation analysis and relevant correlation analyses. Data were not normally distributed for half of the variables; thus, Spearman's correlation analysis was used to assess the correlation between variables. In the mediation models, parenting stress was the predictor variable, children's emotion regulation difficulties and children's emotion regulation scores were outcome variables, and mothers' supportive and non-supportive reactions were mediator variables. The mediation model was conducted only for predictor and outcome variables that had a significant association with maternal reactions (Hayes, 2013).

### 5.2 Bivariate Associations Among Study Variables

Table 5.1 and Table 5.2 present correlations among the variables examined in the study.

In the disappointing gift paradigm children displayed negative emotions ( $M(SD)=3.87(2.59)$ ,  $range=0-9$ ), but not to a great extent.

Mothers' self-reported and observed supportive maternal reactions were significantly associated with each other; however, non-supportive reactions were not. Parenting stress was not significantly associated with mothers' self-reported ( $r_s=-.17$ ,  $p=.256$ ) and observed supportive reactions ( $r_s=-.07$ ,  $p=.654$ ) to their children's negative emotions. As expected, parenting stress was positively associated with mothers' self-reported non-supportive reactions to their children's negative emotions ( $r_s=.42$ ,  $p=.003$ ); but was not significantly related to mothers' observed non-supportive reactions ( $r_s=-.18$ ,  $p=.241$ ).

**Table 5.1** Spearman Correlation Among the Variables

	1	2	3	4	5	6	7	8	9	10
1. Mothers' Self-Reported Supportive Responses	—									
2. Mothers' Self-Reported Non-supportive Responses	-.00	—								
3. Mothers' Observed Supportive Responses	.30*	-.16	—							
4. Mothers' Observed Non-supportive Responses	-.07	-.09	-.11	—						
5. Children's Emotion Regulation Difficulties	-.04	.35*	-.24	-.19	—					
6. Children's Emotion Regulation	.43**	.15	.28	.00	.06	—				
7. Parenting Stress	-.17	.42**	-.07	-.18	.32*	-.23	—			
8. Children's Age (in months)	-.15	-.12	-.01	-.07	.13	-.05	.02	—		
9. Children's Sex (Boys:0 Girls:1)	-.17	.23	-.13	-.08	-.20	-.06	-.03	-.37**	—	
10. SES index	.09	-.10	.03	.23	.04	.15	-.08	-.02	-.13	—

Note. \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .



**Table 5.2** Spearman Correlations Among Subscales of Mothers' Reactions to Children's Negative Emotion

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Mothers' Self-Reported Supportive Reactions														
1. Emotion-Focused Reactions	—													
2. Problem-Focused Reactions	.68***	—												
3. Expressive Encouragement Reactions	.50***	.49***	—											
Mothers' Self-Reported Non-Supportive Reactions														
4. Distress Reactions	-.05	-.11	-.30*	—										
5. Punitive Reactions	.06	.07	-.34*	.47***	—									
6. Minimization Reactions	.30*	.34*	-.06	.41**	.61***	—								
Mothers' Observed Supportive Reactions														
7. Emotion-Focused Reactions	.29	-.02	.38**	-.09	-.18	-.20	—							
8. Problem-Focused Reactions	.26	.15	.04	.08	.22	.10	.04	—						
9. Expressive Encouragement Reactions	-.20	.09	.34*	-.01	-.24	-.29	.36**	-.12	—					
Mothers' Observed Non-Supportive Reactions														
10. Distress Reactions	-.11	-.13*	.17	-.32*	-.18	-.16	.17	-.28	.12	—				
11. Minimization Reactions	-.15	-.04	-.30*	.06	.02	.01	-.23	-.22	.09	-.02	—			
Children's Emotion Regulation Difficulties														
12. Children's Emotion Regulation Difficulties	-.23	-.15	-.08	.20	.32*	.30*	-.04	.29	-.11	-.12	-.16	—		
13. Children's Emotion Regulation	.37**	.38**	.32**	.15	.07	.10	.01	.32	.09	-.04	.04	.03	—	
14. Parenting Stress	-.07	-.09	-.18	.33*	.54**	.23	-.08	.02	-.14	-.04	-.21	.32*	-.23	—

Note. \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

Regarding the relationship between mothers' reactions to children's negative emotions and children's emotion regulation skills, mothers' self-reported supportive reactions were significantly associated with children's emotion regulation skills ( $r_s=.43, p=.002$ ). Specifically, mothers' self-reported emotion-focused, problem-focused, and expressive encouragement reactions were significantly related to children's emotion regulation skills. On the other hand, mothers' observed supportive reactions to their children's negative emotions were not significantly related to children's emotion regulation skills ( $r_s=.28, p=.057$ ). Also, both self-reported and observed non-supportive reactions were not related to children's emotion regulation skills.

Children's emotion regulation difficulty was significantly associated with mothers' self-reported non-supportive reactions ( $r_s=.35, p=.016$ ); but was not significantly related to mothers' observed non-supportive reactions ( $r_s=-.19, p=.202$ ). Specifically, mothers' self-reported punitive and minimization reactions were significantly related to children's emotion regulation difficulties. As expected, parenting stress was significantly related to children's emotion regulation difficulties ( $r_s=.32, p=.016$ ).

Also, demographic variables such as child sex, age, and family SES were not significantly associated with the variables of the main research questions.

Overall, the significant associations between the variables indicate that parenting stress is significantly associated with mothers' self-reported non-supportive reactions, which were related to children's emotion regulation difficulties.

### **5.3 Hierarchical Regression Analysis**

We conducted hierarchical regression analysis to understand the unique contributions of each predictor variable for explaining their variance in children's emotion regulation difficulties in R (RStudio Team, 2016). In the analysis, demographic variables were entered first, mothers' self-reported non-supportive reactions were entered at the second step, and parenting stress at the third step. The model with demographic variables and mothers' self-reported non-supportive reactions as predictor variables was the only significant model. ( $F(3, 39) = 2.80, p = .02, R^2 = .11$ ). In this model, mothers' self-

reported non-supportive reactions significantly predicted children's emotion regulation difficulties ( $b = .38$ ,  $t = 2.38$ ,  $p = .02$ ). When parenting stress was entered as an additional predictor, the model became non-significant. ( $F(4, 38) = 2.59$ ,  $p = .18$ ,  $R^2 = .13$ ).

#### 5.4 Mediation Analyses

We conducted mediation analyses to investigate the mediator role of mothers' supportive and non-supportive reactions between parenting stress and children's emotion regulation skills. A mediation model was only tested when the predictor and outcome variables were significantly correlated with the mediator variable. To examine the significance of the indirect effects, a bootstrapping analysis with 5000 replications and 95% confidence intervals was conducted (Hayes, 2012; MacKinnon et al., 2007).

Results showed that the mediation model with mothers' self-reported non-supportive reactions as the mediator was not significant ( $F(2,40) = 3.18$ ,  $R^2 = .14$ ,  $p = .052$ ) and showed that mothers' self-reported non-supportive reactions did not mediate the relation between parenting stress and children's emotion regulation difficulties (*standardized indirect effect coefficient* = .08,  $SE = .07$ ,  $95\% \text{BCA-CI} = -.04-.23$ ). Furthermore, the model with mothers' self-reported punitive reactions as the mediator was significant ( $F(2,40) = 3.23$ ,  $R^2 = .14$ ,  $p = .049$ ) but the indirect effect indicating mediation was not (*standardized indirect effect coefficient* = .11,  $SE = .11$ ,  $95\% \text{BCA-CI} = -.08-.36$ ) (See Table 5.3).

**Table 5.3** Indirect Effects Among Variables

Indirect Effects	<i>F</i>	<i>R</i> <sup>2</sup>	<i>p</i>	$\beta$	<i>SE</i>	95% <i>CI</i>
Parenting stress → Mothers' Self-reported Non-supportive Reactions → Emotion Regulation Difficulties	3.18	.14	.052	.08	.07	-.04 - .23
Parenting stress → Mothers' Self-reported Punitive Reactions → Emotion Regulation Difficulties	3.23	.14	.049	.10	.03	-.08 - .36

## 6. DISCUSSION

The first question that the present study aimed to answer was whether mothers' reactions to their children's negative emotions related to parenting stress and children's emotion regulation. We found a positive association of parenting stress with mothers' self-reported non-supportive reactions, but not with mothers' observed non-supportive reactions. We also observed a positive association of children's emotion regulation difficulties with mothers' self-reported non-supportive reactions, but again, not with mothers' observed non-supportive reactions. The final question we aimed to answer was whether mothers' reactions to their children's negative emotions mediated the relationship between parenting stress and children's emotion regulation skills. Our analyses revealed no mediating role for mothers' reactions to their children's negative emotions. Overall, our results showed that parenting stress and mothers' reactions to children's negative emotions are related and they both play a role in the development of emotion regulation. However, parenting stress and children's emotion regulation are not related through mothers' reactions to children's negative emotions.

### 6.1 Parenting Stress and Mothers' Reactions to Their Children's Negative Emotions

We expected mothers with higher levels of parenting stress to be more likely to respond to their children's negative emotions in a non-supportive way. In the present study, we showed this expected link between parenting stress and mothers' non-supportive reactions for self-reported reactions, but not for observed ones. The examination of mothers' non-supportive reactions in the data obtained via observation did not reveal a significant association between parenting stress and mothers' reactions. The absence of a significant relationship between these variables might be due to the experimental setting of the present study. All steps of the experimental procedure were completed in a laboratory setting, where mothers may have felt more mindful of their own behaviors and, presumably, displayed fewer negative reactions than they would in a more realistic setting (e.g., at home or in a field study). In addition, video-recording the mothers and children during the experiment may have made mothers aware that their behaviors would be examined, which in turn may have led them to behave "better" or "more favorably"

(i.e., to demonstrate a social desirability bias). This bias is expected to pose a risk also for the self-report measure. Yet, in our study, we observed cases where a participant reported having displayed punitive reactions in the self-report measure but did not perform a punitive reaction toward their child in the observational measure. Therefore, we argue that the observational part of the experiment may have created an awareness in mothers regarding their own behaviors and emotional expressions, which presumably have led to a divergence from the behavioral patterns they typically show in their daily lives in the study.

The association between parenting stress and parental reactions to children's negative emotions was only examined in one study (Mackler et al., 2015). Our results showing a relationship between parenting stress and parental reactions to children's negative emotions in line with the findings of the former studies that demonstrate the significant associations between parent-related factors (such as anxiety, distress, depression, or parenting stress) and parental reactions (e.g., Bertie et al., 2021; Carreras et al., 2019; Crnic et al., 2005; Mackler et al., 2015; Nelson et al., 2009; Pinderhughes et al., 2000).

Regarding mothers' non-supportive reactions (i.e., punitive, distress, and minimization reactions), we found significant associations of parenting stress only with punitive and distress reactions in the self-reported data. The association with punitive reactions may be due to mothers with higher levels of parenting stress being more inclined to get angry and frustrated and finding it more difficult to react calmly, as a result of the higher levels of parenting stress they experienced. The association with distress reactions can be explained by mothers with higher levels of parenting stress displaying negative emotional states, such as feeling upset or angry, more frequently as a response to their children's negative emotions. High levels of parenting stress can impair mothers' ability to regulate, control, and manage their own emotions while confronting a negative situation, which presumably can lead to more frequent displays of distress reactions. As the level of parenting stress decreases, mothers may develop more appropriate and effective coping strategies to regulate their negative emotions, and consequently, display fewer distress reactions toward their children (Bertie et al., 2021). The absence of an association between mothers' minimization reactions and parenting stress may be due to the fact that

minimization reactions do not necessarily root in parenting stress. Minimization reactions may also reflect the behavioral manifestation of mothers' beliefs or attitudes toward expressing emotions. For instance, mothers who perceive displaying negative emotions as signaling traits such as weakness or inadequacy may be more likely to minimize their children's emotions, regardless of the level of parenting stress they experience.

Although there is a positive relationship between parenting stress and mothers' supportive reactions, we did not find significant negative associations between those variables. Decreased levels of parenting stress may not necessarily elicit more supportive reactions from mothers. Many factors such as mothers' own emotion regulation skills or beliefs about emotional expressions can influence mothers' tendency to display supportive reactions (Field et al., 1990; Silk et al., 2006; Morris et al., 2007). Furthermore, parents who experience elevated levels of parenting stress can still perform supportive reactions through their own functional emotion regulation strategies, like cognitive reappraisal. When mothers regulate their own emotions, implementing a cognitive reappraisal strategy could be a protective mechanism (Bertie et al., 2021). Such a strategy may defer the potential negative effects of parenting stress on mothers' supportive reactions toward their children's negative emotions.

## **6.2 Mothers' Reactions to Children's Negative Emotions and Children's Emotion Regulation Skills**

In line with previous studies, both supportive and non-supportive reactions was associated with children's emotion regulation development (Bertie et al., 2021; Gentzler et al., 2015; Seddon et al., 2020; Ramakrishnan et al., 2019; Fabes et al., 2002; O'Neal & Magai, 2005; Price & Kiel, 2022; Suveg et al., 2011). More specifically, mothers' self-reported supportive reactions to children's negative emotions were related to children's emotion regulation skills and self-reported non-supportive reactions were related to children's difficulties regulating emotions. Furthermore, all types of self-reported supportive reactions (i.e. emotion-focused, problem-focused, and expressive encouragement) were significantly related to better emotion regulation skills in children. Such supportive responses can make children feel validated and supported so that they

can have better emotional regulation skills. Another way for supportive reactions to be related to emotion regulation may be observation (Morris, 2007). When children experience negative emotions such as anger, their mothers' supportive reactions can be a model for their children to learn how to behave when they experience these negative emotions (Fabes et al., 2002; Shaffer et al., 2011). As a result, children can improve their ability to handle those negative emotions resulting in better emotion regulation skills.

Regarding mothers' self-reported non-supportive reactions to children's negative emotions, we found a significant relationship between mothers' non-supportive reactions and children's emotion regulation difficulties in parallel with previous studies (Eisenberg & Fabes, 1994; Eisenberg et al., 1992; Morelen & Suveg, 2012; Ramsden & Hubbard, 2002; Shaffer et al., 2011; Jones et al., 2002). In particular, mothers' punitive and minimization reactions were significantly associated with emotion regulation difficulties of children. Such reactions may create an uncomfortable environment for children by conveying the message that displaying and expressing emotions is not appropriate or acceptable, and this uncomfortable environment that limited expression of emotions may result in difficulties with emotion regulation (Morris et al., 2007; Nelson et al., 2009). Unlike punitive and minimization reactions, distress reactions were not significantly associated with children's emotion regulation difficulties. The absence of a significant association between mothers' distress reactions and children's emotion regulation difficulties may be because distress reactions are more closely linked with the mothers' emotional state rather than the child's emotional state (Altan-Aytun et al., 2013).

Although we found significant associations between both self-reported supportive and non-supportive maternal reactions and children's emotion regulation development, mothers' observed reactions were not related to children's emotion regulation skills. The absence of significant associations may be due to methodological reasons. The disappointing gift paradigm may not have been useful enough to observe and generalize mothers' reactions to establish a relationship with children's emotion regulation skills for several reasons. Firstly, the disappointing gift paradigm might be insufficient to elicit intense negative emotions in children; therefore, the mothers may not have reacted as much as they do in everyday life where their children might display more intense negative



emotional expressions. For instance, in the current study, children did not display high levels of negative emotions in response to the disappointing gift paradigm. Secondly, the disappointing gift paradigm generally generated frustration for children and was limited to generating different kinds of negative emotions. Therefore, observing maternal reactions only for children's limited emotions may be limited in terms of establishing a relationship with children's emotion regulation skills. Conversely, since mothers' self-reported reactions were based on 12 different scenarios with six different negative emotions, it might be more comprehensive to assess mothers' different reactions to a variety of negative emotions. Moreover, the laboratory settings may have constrained mothers to display both supportive and non-supportive reactions since they may have been more mindful of their behaviors and were aware of their reactions being videotaped.

### **6.3 Parenting Stress and Children's Emotion Regulation Development**

Previous studies show that there is a relationship between parenting stress and children's emotion regulation skills. In line with this limited literature, we found a significant link between parenting stress and children's emotion regulation difficulties (Chazan-Cohen et al., 2009; Mathis & Bierman; 2015; Planalp et al., 2022). The relationship between these variables may be indirect and there might be several factors that underlie the relationship between parenting stress and children's emotion regulation skills (de Maat et al., 2021; Trumello et al., 2020). We hypothesized that mothers might be overwhelmed due to stress rooted in their parenting role and become more likely to provide non-supportive reactions to their children when they experience negative emotions resulting in poorer emotion regulation skills in children. Although we found significant associations between parenting stress, mothers' non-supportive reactions, and children's emotion regulation difficulties, we did not find a significant mediator role of maternal non-supportive reactions in the relationship between parenting stress and children's emotion regulation difficulties. There could be several potential reasons for the absence of a significant mediation. Firstly, it is possible that the association between parenting stress and children's difficulties in regulating their emotions may be more intricate than what a simple mediation model can explain. Additional factors such as children's temperament and coping mechanisms could potentially interplay with parenting stress and non-

supportive responses from mothers, ultimately influencing the children's capacity to effectively regulate their emotions (Morris et al., 2007). Also, other maternal characteristics (i.e., maternal depression) may contribute to building the relationship between parenting stress and children's emotion regulation difficulties in addition to mothers' non-supportive reactions (Silk et al., 2011). Furthermore, parents' other emotion socialization practices rather than maternal reactions such as the family's emotional climate which includes quality of parent-child attachment, parenting behaviors, marital relations, parenting style, and family expressivity may contribute to providing a significant mediation model in the relationship between parenting stress and children's emotion regulation difficulties (Crnic et al., 2015; Morris et al., 2007; Nelson et al., 2009; Silk et al., 2011). Secondly, it is possible that the sample was not sufficiently large or statistically powerful to identify a significant mediating model between the variables. Finally, cross-sectional studies may have been insufficient to demonstrate the mediating effects as compared to longitudinal studies.

#### **6.4 Strengths and Limitations**

Although limited previous literature investigates the links between parenting stress, maternal reactions, and children's emotion regulation skills, the parenting factors related to the children's emotion regulation skills are often examined independently, leading to unresolved questions. Firstly, previous studies generally measured mothers' reactions through only self-reports (i.e., Eisenberg et al., 1998; Fabes et al., 2002; Nelson et al., 2009; Perry et al., 2020). In the present study, we used both self-report and an observational paradigm to assess maternal reactions to a better understanding of the relationship between these variables and to obtain more ecological validity. We found significant associations between self-reported and observed maternal reactions in terms of mothers' supportive reactions, which demonstrates that mothers can display their reactions in an observational paradigm despite the laboratory setting can limit their real-life reactions. Secondly, no study investigates the mediator role of maternal reactions in the association between parenting stress and children's emotion regulation skills; therefore, this study may contribute to understanding and considering potential mediators

that may indirectly influence the relationship between parenting stress and children's emotion regulation.

Although the present study has some strengths, it is not without limitations. Firstly, a cross-sectional study with a relatively small sample size of similar socioeconomic status limits the generalisability of the findings. Secondly, methodological factors might limit the findings of the current study. The disappointing gift paradigm, which is the task used to elicit children's negative emotions and to observe mothers' reactions toward their children's negative emotions in the present study, may have some limitations in establishing significant associations with the main variables of the present study. The disappointing gift paradigm generally elicited frustration for children and was limited to generating different kinds of negative emotions. Therefore, observing maternal reactions in a situation-specific condition that includes only children's little negative emotions may be limited to determining mothers' real-life reactions that they display toward their children's negative emotions. Considering mothers' self-reported reactions were based on 12 different scenarios with six different negative emotions and found to be significantly related to the main variables of the study, the disappointing gift paradigm is a task that situation and emotion-specific task an essential limitation of the study. In addition, the disappointing gift paradigm may be insufficient to elicit enough intense negative emotions in children; therefore, they may not have reacted in the same way as they reacted to children's more intense negative emotions in real life. Furthermore, the laboratory settings may have constrained mothers to display supportive and non-supportive reactions since they were more mindful of their behaviors and aware that their reactions were videotaped. Thirdly, coding the mothers' reactions on a two-point scale (0: never observed, 1: constantly observed) for a concise period (2-min) may have limited the variability of the findings regarding maternal reactions. Fourthly, children's emotion regulation skills were only based on maternal reports that may be limited and biased in reflecting children's emotion regulation skills. In addition to maternal reports, paternal reports could also have been considered to assess children's emotion regulation skills. In addition to self-reports, it would be better to assess emotion regulation in an observational way, both for ecological validity and for comparison with self-reports. Fifthly, we only evaluated parenting stress, including the stress arising from the parental role; however,

the stress in other domains such as financial stress, perceived stress, and marital stress experienced by mothers may also contribute to parenting stress which, in turn, parental reactions toward their children. For example, economic difficulties can lead to concerns and stress about their parenting role to provide sufficient care for their children (Cassells & Evans, 2017). Finally, cultural context plays a role in shaping children's emotional expressions and parents' emotion socialization processes (Friedlmeier et al., 2011); however, our study includes only Turkish parent-child dyads. For example, there may be variations in the importance attributed to emotions such as sadness versus anger, or anger versus shame cross-culturally. Therefore, parents would be more likely to be motivated to emphasize and pay attention to emotions that hold particular salience within their cultural context. This may result in variations in parents' emotion socialization processes and children's emotional expressions and emotion regulation abilities. Therefore, investigating the impacts of parental reactions and its influence on children's emotion regulation skills in only Turkish sample can limit our understanding in this domain.

## **6.5 Future Directions**

Future studies may benefit from using a longitudinal design with larger samples including mothers and fathers from all socio-economic strata, for more generalizable findings. Although a few studies demonstrate that fathers have an essential role in emotion regulation development (Cabrera, & Mitchell, 2009; Ping et al., 2022; Volling, et al., 2002), the limited knowledge on this issue would be extended with future studies. Fathers' participation would be essential to understand their tendencies to react to their children's negative emotions and influences on the development of children's emotions. In addition, since the concept of parenthood has undergone significant transformations in recent decades, with a notable rise in the presence of fathers as a caregiver, it is advisable to include diverse samples that accurately represent both mothers and fathers in future research. It would also be possible to investigate the role of parenting stress in fathers to compare it to that of mothers. Moreover, since children's emotion regulation skills in early childhood mainly depend on their caregivers, the influences of parenting stress and maternal reactions may differ according to specific age periods (i.e., preschool years, middle childhood, and adolescence); hence, longitudinal studies can follow multiple

developmental periods and examine the change in the role of those variables. For example, adolescents may lead to more parenting stress since adolescence brings various changes for children. Therefore, future research would differentiate parenting stress among various age groups.

Furthermore, children's emotion regulation can vary in different settings, such as school and peer relationships, children's participation in social environments, and the influence of socialization with other people may influence those relationships. For example, the influences of maternal reactions on emotion regulation may diminish, and the influence of teachers' behaviors and peer relations may increase in time; therefore, conducting a study that includes other people with whom children spend time and socialize would be beneficial to a better understanding of additional factors that contribute to the relationship between parenting stress, maternal reactions, and emotion regulation development. Furthermore, future studies could develop and use more effective tasks and paradigms to observe maternal reactions. For example, the possible task would be enough to elicit a range of negative emotions from children to observe mothers' reactions toward those negative emotions for a longer duration. Also, the tasks that involve more mother-child interaction in which they act and discuss together (e.g., challenging puzzle tasks or problem-solving tasks) could make it easier to observe mothers' reactions more frequently.

In Abidin's model, the factors influencing parenting stress consist of three domains namely parent-related (i.e., psychopathological issues), child-related (i.e., temperament), and situational factors (i.e., social support and marital satisfaction). It may be important to investigate these possible influencing factors that promote the relationship between parenting stress and children's emotion regulation skills would be important in future research. Therefore, in addition to parenting stress, other parenting factors such as parental burnout could be considered in future studies. Future studies may also investigate parents' other emotion socialization practices such as parenting behaviors and emotional expressivity that are influenced by parenting factors. Children's characteristics would be an important factor in establishing an association between parenting stress and their emotion regulation skills; hence, future studies would examine children's characteristics

such as temperament and coping strategies which would be related to parenting stress and maternal reactions. In addition, potential situational factors such as social support, family's economic stress, and marital stress can also be considered. Lastly, cross-cultural studies are needed to understand these relationships clearly, since parenting stress and maternal reactions might vary from culture to culture. For example, while parenting stress could be considered a factor that can be regarded as ordinary in Turkish culture and does not have much negative influence, it may be a factor that may cause more negative results for parents and their children in other cultures. In addition, the perception of parental reactions as supportive or non-supportive may vary cross-culturally. For instance, Chinese parents perceived punishment and minimizing reactions as signs of parental engagement and thus they consider these reactions as acceptable and potentially useful for children's emotion regulation (Yang et al., 2020). Therefore, different cultural norms may influence how emotions are expressed, discussed, and managed. To sum up, cultural factors have a significant influence on parenting stress and the socialization of emotions (Eisenberg et al., 2020; Raval & Walker, 2019).

## **6.6 Implications**

The results of the current study suggest that parenting stress has a negative role in maternal reactions and the development of children's emotion regulation skills. Parents who experience elevated levels of parenting stress may benefit from seeking professional guidance and help. Therefore, preparing prevention and intervention studies to decrease mothers' parenting stress seems to be important. Firstly, parenting education programs might be designed to instruct parents on efficient parenting techniques, managing stress, and coping strategies to handle parenting stress. Secondly, family therapy might be addressed to facilitate better family communication and identify conflicts that may lead to parenting stress. Fourthly, providing social support to parents through different resources such as parenting groups, peer support, family support, and community resources can help decrease stress levels and enhance their capacity to manage difficulties (Abidin, 1990; Fang et al., 2022). Finally, early intervention programs for families with young children may aim to recognize and tackle parenting stress and associated problems before they become more severe. Such programs may involve home visits, parenting

courses, and other supportive services. Furthermore, prevention and intervention studies that promote healthy emotional development and reduce emotion regulation difficulties in children might be prepared. Parents might play various games that support emotional development by interacting with their children. Also, parent training programs are designed to teach parents effective parenting techniques, including positive reinforcement and active listening, which can help them promote their children's emotional development.



## 7. CONCLUSION

Overall, the current study contributed to the empirical literature by investigating the relationship between parenting stress, mothers' reactions to their children's negative emotions, and children's emotion regulation development, extending it by using an observational paradigm and examining the relationship between parenting stress and parental reactions that were not previously investigated. Our findings revealed that parenting stress and maternal reactions are related, and they both have an essential role in the development of emotion regulation skills. Nevertheless, mothers' reactions to children's negative emotions did not mediate the relationship between parenting stress and children's emotion regulation. To sum up, this study might contribute to a better understanding of the direct and indirect associations that accurately illustrate the relationship between parenting stress and children's emotion regulation skills. Gaining insight into these direct and indirect connections is vital for providing parents with knowledge about the impact of parenting stress on their children's emotional development. Additionally, this understanding can guide the development of suitable prevention and intervention programs aimed at mitigating the effects of parenting stress on children's emotion regulation development.



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## APPENDIX A

### A.1 Anne Baba Stres Ölçeği

ANNE BABA STRES ÖLÇEĞİ	Her zaman	Sık sık	Bazen	Hiçbir zaman
Sevgili Anne Babalar Aşağıda sizlerin anne babalığa ilişkin duygu ve düşünceleriniz ile ilgili ifadeler yer almaktadır. Lütfen aşağıdaki her ifadeyi okuyunuz ve size en uygun gelen seçeneği işaretleyiniz. Lütfen hiçbir soruyu boş bırakmayınız. Teşekkürler.				
1.Çocuğumu mutlu etmek benim için çok zor.				
2.Çocuğumun bakımı ile ilgili sorumluluklarım beni öyle yoruyor ki				
3.Anne/ Baba olmanın zor olduğunu düşünüyorum.				
4. Çocuğumun bazı şeyleri beni kızdırmak için yaptığını düşünüyorum.				
5. Çocuk sahibi olduğumdan beri kendime zaman ayıramıyorum.				
6. Anne/Baba olduğumdan beri kendimi daha yaşlı hissediyorum.				
7. Çocuğum bir hata yaptığında bundan kendimi sorumlu tutuyorum.				
8. Çocuğuma kızdığımında davranışlarımı kontrol etmekte zorlanıyorum.				
9. Anne/Babalığa ilişkin sorumluluklarım beni psikolojik açıdan zorluyor.				
10. Çocuğumun diğer çocuklara göre daha zor bir çocuk olduğunu				
11. Hayal ettiğim gibi bir anne/baba olmadığımı düşünüyorum.				
12. Çocuğumun istekleri karşısında tutarsız davranabiliyorum.				
13. Çocuğumun ihtiyaçlarını yeterince karşılayamadığımı hissediyorum.				

14. Hayatımdaki en temel stres kaynağı, çocuk sahibi olmaktır.				
15. Çocuğumu eğitmek konusunda kendimi yetersiz buluyorum.				
16 Başarısız bir anne/baba olduğumu düşünüyorum.				



## APPENDIX B

### B.1 Çocukların Olumsuz Duygularıyla Başetme Ölçeği

- Aşağıda günlük yaşamınızda, çocuğunuzla ilişkilerinizde karşılaşılabileceğiniz bazı durumlar maddeler halinde verilmiştir. Her durumun altına da anne-baba olarak gösterebileceğiniz bazı davranışlar sıralanmıştır.
- Lütfen bu davranışların her birini ne kadar sıklıkla yaptığınızı belirtiniz. Örneğin, birinci maddede belirtilen durumla ilgili olarak 6 davranış seçeneğinin her birini ne sıklıkla yaptığınızı 1'den 5'e kadar sayılardan uygun olanı daire içine alarak belirtiniz. Böylece her bir durumla ilgili 6 davranış için de cevap vermiş olacaksınız.
- Eğer çocuğunuzun daha önce böyle bir durumla karşılaşmadığını düşünüyorsanız, "böyle olsaydı ne yapardım" diye düşünerek yanıtlayınız.

1) Eğer çocuğum hastalandığı ya da bir yerini incittiği için arkadaşının doğum günü partisine veya oyun davetine gidemiyorsa ve bundan dolayı öfkeli olursa, ben;

	Hiç böyle yapmam	Nadiren böyle yaparım	Belki böyle yaparım	Büyük olasılıkla böyle yaparım	Kesinlikle böyle yaparım
a) Çocuğumu sakinleşmesi için odasına gönderirim.	1	2	3	4	5
b) Çocuğuma kızarırım.	1	2	3	4	5
c) Çocuğuma arkadaşları ile birlikte olabileceği başka yollar düşünmesi için yardımcı olurum (örneğin, bazı arkadaşlarını partiden sonra davet edebilir).	1	2	3	4	5
d) Çocuğuma partiyi kaçırmayı büyütmemesini söylerim.	1	2	3	4	5



e) Çocuğumu, öfkelerini ve hayal kırıklıklarını ifade etmesi için cesaretlendiririm.	1	2	3	4	5
f) Çocuğumu yatıştırırım ve kendini daha iyi hissetmesi için eğlenceli bir şeyler yaparım.	1	2	3	4	5

2) Eğer çocuğum bisikletinden düşer, onu kırar ve sonra da üzülüp ağlarsa, ben;

	Hiç böyle yapmam	Nadiren böyle yaparım	Belki böyle yaparım	Büyük olasılıkla böyle yaparım	Kesinlikle böyle yaparım
a) Sakin kalırım ve endişelenmem.	1	2	3	4	5
b) Çocuğumu rahatlatır ve kazasını unutmasını sağlamaya çalışırım.	1	2	3	4	5
c) Çocuğuma aşırı tepki gösterdiğini söylerim.	1	2	3	4	5
d) Çocuğuma bisikletin nasıl tamir edileceğini anlaması için yardımcı olurum.	1	2	3	4	5
e) Çocuğuma böyle bir durumda ağlamanın doğal olduğunu söylerim.	1	2	3	4	5
f) Çocuğuma ağlamayı bırakmasını yoksa bisiklete binmesine	1	2	3	4	5

izin vermeyeceğimi söylerim.					
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3) Eğer çocuğum çok değerli bir eşyasını kaybeder ve ağlarsa, ben;

	Hiç böyle yapmam	Nadiren böyle yaparım	Belki böyle yaparım	Büyük olasılıkla böyle yaparım	Kesinlikle böyle yaparım
a) Bu kadar dikkatsiz olduğu ve sonra da ağladığı için keyfim kaçar.	1	2	3	4	5
b) Çocuğuma aşırı tepki gösterdiğini söylerim.	1	2	3	4	5
c) Çocuğuma, henüz bakmadığı yerleri düşünmesinde yardımcı olurum.	1	2	3	4	5
d) Mutlu şeylerden bahsederek çocuğumun dikkatini başka yöne çekerim.	1	2	3	4	5
e) Ona mutsuz olduğunda ağlamasının doğal olduğunu söylerim.	1	2	3	4	5
f) Dikkatli olmazsan işte böyle olur derim.	1	2	3	4	5

4) Eđer çocuđum iđneden korkuyor ve iđne olma sırasını beklerken titreyip ađlıyorsa, ben;

	Hiç böyle yapmam	Nadiren böyle yaparım	Belki böyle yaparım	Büyük olasılıkla böyle yaparım	Kesinlikle böyle yaparım
a) Ona, kendini toparlamasını yoksa yapmaktan hoşlandığı bir şeye izin vermeyeceđimi söylerim (örneğin televizyon seyretmek gibi).	1	2	3	4	5
b) Hissettiđi korku hakkında konuşması için çocuđumu cesaretlendiririm.	1	2	3	4	5
c) Ona, iđne olmayı büyük bir mesele haline getirmemesini söylerim.	1	2	3	4	5
d) Ona ağlayarak bizi utandırmamasını söylerim.	1	2	3	4	5
e) İđneden önce ve sonra onu rahatlatırım.	1	2	3	4	5
f) Çocuđuma ne yaparsa iđnenin daha az acıtacađını anlatırım (örneğin, kendini kasmaz veya derin nefes alırsa daha az acıyacađı gibi).	1	2	3	4	5

5) Eđer çocuđum öđleden sonrađı bir arkadařının evinde geđirecekse ve benim onunla kalamamam onu tedirgin edip uzerse, ben;

	Hiđ böyle yapmam	Nadiren böyle yaparım	Belki böyle yaparım	Büyük olasılıkla böyle yaparım	Kesinlikle böyle yaparım
a) Arkadařıyla ne kadar eđleneceđinden bahsederek onun ilgisini başka yöne çekmeye çalışırım.	1	2	3	4	5
b) Arkadařının evinde ben yokken tedirgin olmaması için çocuđuma neler yapabileceđini düşünmesinde yardımcı olurum (örneğin, en sevdiđi kitabını ya da oyuncuđını yanında götürmesi gibi).	1	2	3	4	5
c) Çocuđuma aşırı tepki göstermeyi ve bebek gibi davranmayı bırakmasını söylerim.	1	2	3	4	5
d) Çocuđuma, eđer yatıřmazsa bundan sonra dışarı çıkmasına izin vermeyeceđimi söylerim.	1	2	3	4	5
e) Çocuđumun tepkileri yüzünden keyifsiz ve sıkıntılı olurum.	1	2	3	4	5
f) Tedirginliđi ve keyifsizliđi hakkında konuřması için çocuđumu cesaretlendiririm.	1	2	3	4	5

6) Eğer çocuğum arkadaşları ile birlikte yer aldığı bir grup faaliyetinde hata yaptığı için utanır ve ağlamaklı olursa, ben;

	Hiç böyle yapmam	Nadiren böyle yaparım	Belki böyle yaparım	Büyük olasılıkla böyle yaparım	Kesinlikle böyle yaparım
a) Çocuğumu rahatlatır ve daha iyi hissetmesini sağlamaya çalışırım.	1	2	3	4	5
b) Çocuğuma aşırı tepki gösterdiğini söylerim.	1	2	3	4	5
c) Kendimi rahatsız ve utanmış hissedirim.	1	2	3	4	5
d) Çocuğuma kendini toparlamasını yoksa doğruca eve gideceğimizi söylerim.	1	2	3	4	5
e) Çocuğumu, yaşadığı utanma hissi hakkında konuşması için cesaretlendiririm.	1	2	3	4	5
f) Çocuğuma alıştırmaya yapmasında yardımcı olacağımı ve böylece bir dahaki sefere daha iyisini yapacağımı söylerim.	1	2	3	4	5

7) Eğer çocuğum bir müsamere ya da spor faaliyeti nedeniyle seyirci karşısına çıkacağı için çok heyecanlanır ve kaygılanırsa, ben;

	Hiç böyle yapmam	Nadiren böyle yaparım	Belki böyle yaparım	Büyük olasılıkla böyle yaparım	Kesinlikle böyle yaparım
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a) Çocuğuma, sırası geldiğinde kendini hazır hissetmesi için neler yapabileceğini düşünmesinde yardımcı olurum (örneğin, biraz ısınma yapmak ve seyirciye bakmamak gibi).	1	2	3	4	5
b) Heyecan ve kaygısının geçmesi için çocuğuma rahatlatıcı bir şeyler düşünmesini öneririm.	1	2	3	4	5
c) Sakin kalırım ve kaygılanmam.	1	2	3	4	5
d) Çocuğuma bebek gibi davrandığımı söylerim.	1	2	3	4	5
e) Çocuğuma sakinleşmezse oradan hemen ayrılıp doğruca eve gideceğimizi söylerim.	1	2	3	4	5
f) Hissettiği heyecan ve kaygı hakkında konuşması için çocuğumu cesaretlendiririm.	1	2	3	4	5

8) Eğer çocuğum bir arkadaşından istemediği bir doğum günü hediyesi aldığı için hayal kırıklığına uğramış, hatta kızgın görünüyorsa, ben;

	Hiç böyle yapmam	Nadiren böyle yaparım	Belki böyle yaparım	Büyük olasılıkla böyle yaparım	Kesinlikle böyle yaparım
a) Çocuğumu hissettiği hayal kırıklığını ifade	1	2	3	4	5

etmesi için cesaretlendiririm.					
b) Çocuğuma bu hediye onun istediği başka bir şeyle değiştirilebileceğini söylerim.	1	2	3	4	5
c) Kaba davranışı yüzünden çocuğuma kızmam.	1	2	3	4	5
d) Çocuğuma aşırı tepki gösterdiğini söylerim.	1	2	3	4	5
e) Çocuğumu, arkadaşının hislerine karşı duyarsız olduğu için azarlarım.	1	2	3	4	5
f) Eğlenceli şeyler yaparak, çocuğumun kendisini daha iyi hissetmesini sağlamaya çalışırım.	1	2	3	4	5

9) Eğer çocuğum televizyonda ürkütücü bir program seyrettikten sonra korkuya kapılıp uyuyamıyorsa, ben;

	Hiç böyle yapmam	Nadiren böyle yaparım	Belki böyle yaparım	Büyük olasılıkla böyle yaparım	Kesinlikle böyle yaparım
a) Çocuğumu, onu korkutan şey konusunda konuşması için cesaretlendiririm	1	2	3	4	5
b) Anlamsız hareketinden dolayı çocuğuma öfkelenirim.	1	2	3	4	5

c) Çocuğuma aşırı tepki gösterdiğini söylerim.	1	2	3	4	5
d) Çocuğuma uyuyabilmesi için neler yapabileceğini düşünmesinde yardımcı olurum (örneğin, yatağa bir oyuncak alması, ışığı açık bırakması gibi).	1	2	3	4	5
e) Ona yatağa gitmesini yoksa bundan sonra televizyon seyretmesine hiç izin vermeyeceğimi söylerim.	1	2	3	4	5
f) Çocuğumla eğlenceli bir şeyler yaparak korktuğu şeyi unutması için ona yardımcı olurum.	1	2	3	4	5

10) Eğer parkta çocuklar oyunlarına katılmasına izin vermedikleri için çocuğum ağlamaklı olursa, ben;

	Hiç böyle yapmam	Nadiren böyle yaparım	Belki böyle yaparım	Büyük olasılıkla böyle yaparım	Kesinlikle böyle yaparım
a) Sakin kalırım, keyfim kaçmaz.	1	2	3	4	5
b) Çocuğuma, ağlamaya başlarsa doğruca eve gideceğimizi söylerim.	1	2	3	4	5
c) Çocuğuma, kendini kötü hissettiğinde ağlamasının doğal	1	2	3	4	5



olduğunu söylerim.					
d) Çocuğumu rahatlatırım ve mutluluk veren şeyler düşünmesini sağlamaya çalışırım.	1	2	3	4	5
e) Çocuğuma başka şeyler yapmayı düşünmesi için yardımcı olurum.	1	2	3	4	5
f) Çocuğuma kendini birazdan daha iyi hissedeceğini söylerim.	1	2	3	4	5

11) Eğer çocuğum diğer çocuklarla oynarken, onlardan biri çocuğumla alay ettiği için bir anda titremeye ve gözleri yaşarmaya başlarsa, ben;

	Hiç böyle yapmam	Nadiren böyle yaparım	Belki böyle yaparım	Büyük olasılıkla böyle yaparım	Kesinlikle böyle yaparım
a) Çocuğuma bunu büyütmemesi gerektiğini söylerim.	1	2	3	4	5
b) Canım sıkılır, keyfim kaçır.	1	2	3	4	5
c) Çocuğuma toparlanmasını, yoksa doğruca eve gideceğimizi söylerim.	1	2	3	4	5
d) Diğer çocukların alaylı sözleriyle başa çıkabilmesi için neler yapabileceğini	1	2	3	4	5

düşünmesinde çocuğuma yardımcı olurum.					
e) Çocuğumu rahatlatırım ve bu keyifsiz olayı unutmaması için onunla bir oyun oynarım.	1	2	3	4	5
f) Alay edilmenin onu nasıl incittiği hakkında konuşması için çocuğumu cesaretlendiririm.	1	2	3	4	5

12) Eğer çocuğum çevresinde tanımadığı kişiler olduğunda hep utanıyor ve ürküyorsa ya da aile dostları misafirlığe geldiği zaman ağlamaklı olup odasından çıkmak istemiyorsa, ben;

	Hiç böyle yapmam	Nadiren böyle yaparım	Belki böyle yaparım	Büyük olasılıkla böyle yaparım	Kesinlikle böyle yaparım
a) Çocuğuma, aile dostlarımızla karşılaştığı zaman daha az korkması için neler yapabileceğini düşünmesinde yardımcı olurum.	1	2	3	4	5
b) Çocuğuma, tedirgin hissetmenin doğal olduğunu söylerim.	1	2	3	4	5
c) Aile dostlarımızla yapabileceğimiz eğlenceli şeylerden bahsederek çocuğumu mutlu etmeye çalışırım.	1	2	3	4	5

d) Çocuğumun tepkileri yüzünden kendimi sıkıntılı hisseder ve rahatsızlık duyarım.	1	2	3	4	5
e) Çocuğuma oturma odasına gelip aile dostlarımızla beraber oturmak zorunda olduğunu söylerim.	1	2	3	4	5
f) Çocuğuma bebek gibi davrandığını söylerim.	1	2	3	4	5

## APPENDIX C

### C.1 Duygu D zenleme  leđi

Ařađıdaki listede bir ocuđun duygusal durumu ile ilgili eřitli ifadeler yer almaktadır. Verilen numaralandırma sistemini kullanarak, ařađıdaki davranıřları ocuđunuzda ne sıklıkla g�zlemlediđinizi l�tfen iřaretleyiniz.	Hibir zaman	Bazen/ Nadiren	Sık sık	Her zaman
1. Neřeli bir ocuktur.				
2. Duygu hali ok deđiřkendir (ocuđun duygu durumunu tahmin etmek zordur �nk� neřeli ve mutluyken kolayca �zg�nleřebilir).				
3. Yetiřkinlerin arkadařaa ya da sıradan (n�tr) yaklařımlarına olumlu karřılık verir.				
4. Bir faaliyetten diđerine kolayca geer; kızıp sinirlenmez, endiřelenmez (kaygılanmaz), sıkıntı duymaz veya ařırı derecede heyecanlanmaz.				
5. �z�nt�s�n� veya sıkıntısını kolayca atlatabilir (orneđin, canını sıkan bir olay sonrasında uzun s�re surat asmaz, endiřeli veya �zg�n durmaz).				
6. Kolaylıkla hayal kırıklıđına uđrayıp sinirlenir (huysuzlařır, �fkelenir).				
7. Yařıtlarının arkadařaa ya da sıradan (n�tr) yaklařımlarına olumlu karřılık verir.				
8. �fke patlamalarına, huysuzluk n�betlerine eđilimlidir.				
9. Hořuna giden bir řeye ulařmak iin bekleyebilir. (Orneđin, řeker almak iin sırasını beklemesi gerektiđinde keyfi kamaz veya heyecanını kontrol edebilir).				
10. Bařkalarının sıkıntı hissetmesinden keyif duyar (orneđin, biri incindiđinde veya ceza aldıđında g�ler; bařkalarıyla alay etmekten zevk alır).				
11. Heyecanını kontrol edebilir (orneđin, ok hareketli oyunlarda kontrol�n� kaybetmez veya				

uygun olmayan ortamlarda aşırı derecede heyecanlanmaz).				
12. Mızımsızdır ve yetişkinlerin eteğinin dibinden ayrılmaz.				
13. Ortılığı karıştırarak çevresine zarar verebilecek enerji patlamaları ve taşkınlıklara eğilimlidir.				
14. Yetişkinlerin sınır koymalarına sinirlenir.				
15. Üzüldüğünü, kızıp öfkelenmişini veya korktuğunu söyleyebilir.				
16. Üzgün veya halsiz görünür.				
17. Oyuna başkalarını katmaya çalışırken aşırı enerjik ve hareketlidir.				
18. Yüzü ifadesizdir; yüz ifadesinden duyguları anlaşılmaz.				
19. Yaşlılarının arkadaşça ya da sıradan (nötr) yaklaşımlarına olumsuz karşılık verir (örneğin, kızgın bir ses tonuyla konuşabilir ya da ürkek davranabilir).				
20. Düşünmeden, ani tepkiler verir.				
21. Kendini başkalarının yerine koyarak onların duygularını anlar; başkaları üzgün ya da sıkıntılı olduğunda onlara ilgi gösterir.				
22. Başkalarını rahatsız edecek veya etrafa zarar verebilecek kadar aşırı enerjik, hareketli davranır.				
23. Yaşlıları ona saldırgan davranır ya da zorla işine karışırsa, bu durumlarda hissedebileceği olumsuz duygularını (kızgınlık, korku, öfke, sıkıntı) uygun bir şekilde gösterir.				
24. Oyuna başkalarını katmaya çalışırken olumsuz duygular gösterir (örneğin, aşırı heyecan, kızgınlık, üzüntü).				

## APPENDIX D

### D.1 Demografik Bilgi Formu

1. Çocuğunuzun doğum tarihi: Gün.....Ay.....Yıl.....

2. Çocuğunuzun cinsiyeti:  Kız  Oğlan

3. Sizin doğum tarihiniz: Gün..... Ay.....Yıl.....

4. Ailenizi aşağıdakilerden hangisi en doğru şekilde tanımlar?

Tek ebeveynli aile

İki ebeveynli aile

5. Eğitim durumunuz (son bitirdiğiniz okul) nedir?

a. İlkokul terk

b. İlkokul mezunu

c. Ortaokul mezunu

d. Lise mezunu

e. Üniversite mezunu

f. Yüksek lisans mezunu

g. Doktora mezunu

6. Çocuğunuzun babasının eğitim durumu (son bitirdiğı okul) nedir?

a. İlkokul terk

b. İlkokul mezunu

c. Ortaokul mezunu

d. Lise mezunu

e. Üniversite mezunu

f. Yüksek lisans mezunu

g. Doktora mezunu

7. Sizi en iyi tanımlayan şıkkı seçiniz:

a. Tam zamanlı çalışıyor

b. Yarı zamanlı / evden çalışıyor

c. Çalışmıyor

d. Öğrenci veya kursa gidiyor

e. İş arıyor, bulsa çalışmak istiyor

f. Gönüllü çalışıyor

g. Emekli

8. Çocuğunuzun babasını en iyi tanımlayan şıkkı seçiniz:

- a. Tam zamanlı çalışıyor
- b. Yarı zamanlı / evden çalışıyor
- c. Çalışmıyor
- d. Öğrenci veya kursa gidiyor
- e. İş arıyor, bulsa çalışmak istiyor
- f. Gönüllü çalışıyor
- g. Emekli

9. Hanenizin aylık toplam geliri aşağıdakilerden hangi aralıktadır? Evinizde yaşayan tüm kişilerin maaş, kira gibi tüm gelirlerinin toplamını düşünerek yanıtlayınız.

- a. 2200 TL ve altı
- b. 2200 TL – 4015 TL
- c. 4015 TL – 5700 TL
- d. 5700 TL – 8090 TL
- e. 8090 TL – 14470



## APPENDIX E

### E.1 Çocukların Olumsuz Duygularına Karşı Anne Tepkileri Kodlama Çizelgesi

Anne Tepkileri	Çocukların Olumsuz Duygularına Karşı Kodlanacak Tepkiler	0 = Hiç göstermedi	1=Sürekli olarak gösterdi
Duygu İfadesini Kolaylaştıran Tepkiler	Ebeveyn, çocuğunu olumsuz duyguları ifade etmeye teşvik eder. Örnek tepkiler; Çocuğu, öfkesini ve hayal kırıklığını ifade etmesi için cesaretlendirmek Çocuğa böyle bir durumda ağlamanın doğal olduğunu söylemek Tedirginliği ve keyifsizliği hakkında konuşması için çocuğu cesaretlendirmek Duyguyu tanımlamak (sen hayal kırıklığı yaşıyorsun sanırım) Üzıldün mü diye sormak		
Problem-odaklı Tepkiler	Ebeveyn, çocuğun sıkıntısına neden olan sorunu çözmesine yardım eder. Örnek tepkiler; Paketten çıkan nesne veya oyuncakla farklı şekillerde oynama konusunda yönlendirmek Çocuğun dikkatini kutudaki kalp vb. gibi başka yönlere çekmek Araştırmacı gelene kadar bu olumsuz duygudan uzaklaşmak için yapılacak şeyler düşünmek/önermek Hediyeyi istediği hediyeyler değiştirebileceğini söylemek		
Duygu-odaklı Tepkiler	Ebeveyn, çocuğun daha iyi hissetmesine yardımcı olmak için tasarlanmış stratejilerle yanıt verir. Örnek tepkiler; Çocuğu yatıştırmak ve kendini daha iyi hissetmesi		

	<p>için eğlenceli bir şeyler yapmak, oyun oynamak Çocuğu rahatlatmak ve bu durumu unutmamasını sağlamaya çalışmak Çocuğa kendini birazdan daha iyi hissedeceğini söylemek</p>		
Sıkıntı Tepkileri	<p>Çocuk olumsuz duygular gösterdiğinde ebeveyn sıkıntılı tepkiler gösterir. Örnek maddeler; Çocuğun hayal kırıklığı veya üzülmeye karşısında endişelenmek, keyfinin kaçması Çocuğunun gösterdiği tepkiden dolayı utanmış hissetmek</p>		
Küçümseyici Tepkiler	<p>Ebeveyn, çocuğun duygularını küçümser, görmezden gelir veya göz ardı eder. Örnek tepkiler; Paketten yanlış hediye çıkmasını büyütmemesini söylemek Çocuğa aşırı tepki gösterdiğini söylemek Bunun büyük bir mesele olmadığını söylemek Bebek gibi davranmayı bırak demek Sarkastik gülüş</p>		
Cezalandırıcı Tepkiler	<p>Ebeveyn çocuğun duygularını cezalandırır. Çocuk olumsuz duygu gösterdiğinde buna karşılık herhangi bir cezadan bahsetmesi</p>		

## APPENDIX F

### F.1 Çocukların Olumlu ve Olumsuz Duygu İfade Kodlama Çizelgesi

Çocuk onu hayal kırıklığına uğratan hediyesini açtıktan sonraki 30 sn. boyunca hareketlerini ve mimiklerini gözlemleyin. Aşağıdaki ifadeleri işaretleyin ve puanlayın.

<b>Olumlu İfadeler</b>	Gözlemlendi:1	Gözlemlenmedi:0
1.Dişleri gösteren büyük bir gülümseme		
2.Dudaklar kapalı büyük bir gülümseme		
3.Coşkulu bir teşekkürler		
4.Kaşlarını olumlu bir sürpriz görmüş gibi kaldırma		
5.Göz kontağı kurarak gülümseme		
6.Gülerken gözlerini kırıştıрма		
<b>Olumsuz İfadeler</b>		
1.Burun kıvrırma		
2.Kaşlarını çatma		
3. Hiç beğenmedim demek		
4.Dudak bükme		
5.Hiç gülümsememe		
6.Göz kontağından kaçınma		
7.Olumsuz seslerle tepki verme		

8.Olduđu yerden kalkıp uzaklaşma		
9.Omuz silkme- görmezden gelme		
10.Oyuncağı fırlatma		
11.Ağlama		
12.Hediyeyi kutuya geri koymak & kapatmak		



## CURRICULUM VITAE

### Personal Information

Gizem Akel Güçlü

### Academic Background

Bachelor's Degree Education: Istanbul Şehir University, Psychology, 06.2019

Graduate Education: Kadir Has University, Psychological Sciences, 06.2023

Foreign Languages: English, German

### Work Experience

Research Assistant at TUBITAK Project 3501 *present – 02/2022*

Kadir Has University

Project Name: Cognitive, Language and Attention Development in Infancy and Early Childhood

Research Assistant at TUBITAK Project 1003 *07/2020 – 01/2022*

*MEF University*

Project Name: The Effect of the Family's Attitudes towards Child Rearing and Formal Education on the Child's Academic, Cognitive and Social-Emotional Development & School Physical Quality on the Child's Academic, Cognitive and Social-Emotional Development

Education Consultant *09/2018 – 05/2020*

Uskudar Child University, Istanbul

Specialist Assistant *06/2017 – 09/2019*

*Istanbul Sehir University, Istanbul*

Student Affairs:

- Office assistant for; course selection (add-drop weeks), student registration duties,
- Archive ordering, diploma control, informing students about related questions

Corporate Communication:

- Introducing the university to new students

Career Center:

- Orientation Days organization

### Poster Presentations

**Akel, G. & Öner, S.,** (2022, September). False memory in the COVID-19 Outbreak: The Effects of Pandemic-Related Stress and Negative Emotions. Poster session to be presented at the Autobiographical Memory in Aging and Dementia conference organized by CON AMORE.

Yildiz, E., Keşşafoglu, D., Altundal, M., **Akel, G.**, & Uzundag B. A. (2022, September). Parents' Perceived Social Support Moderated the Relation between Parenting Stress and Children's Effortful Control. Poster session to be presented at the Koç University Developmental Psychology Symposium.

Yildiz, E., Keşşafoglu, D., Altundal, M.\*, **Akel, G.**, & Uzundag B. A. (2022, August). Parents' Perceived Social Support Moderated the Relation between Parenting Stress and Children's Effortful Control. Poster session to be presented at the 7th Lancaster Conference on Infant and Early Childhood Development.

### **Teaching Experiences**

Teaching Assistant

Research Methods 04/2020 – 06/2020

*Istanbul Sehir University*

Personality Psychology 09/2019 – 04/2020

*Istanbul Sehir University*

Lifespan Developmental Psychology 09/2018 – 06/2019

*Istanbul Sehir University*

Biological Psychology 09/2017 – 06/2018

*Istanbul Sehir University*

Responsibilities (for all of them): Attending lectures, proctoring, grading exams, in-class assignment, and project papers, doing in-class activities, mailing, organizing and attending objection meetings