

COGNITIVE EMOTION REGULATION STRATEGIES IN ADOLESCENCE:  
INVESTIGATING THE ROLE OF MOTHERS' BELIEFS ABOUT SHAMING  
AND NEGATIVE PARENTING ON MALADAPTIVE STRATEGIES

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AND NEGATIVE PARENTING ON MALADAPTIVE STRATEGIES**

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## ABSTRACT

### COGNITIVE EMOTION REGULATION STRATEGIES IN ADOLESCENCE: INVESTIGATING THE ROLE OF MOTHERS' BELIEFS ABOUT SHAMING AND NEGATIVE PARENTING ON MALADAPTIVE STRATEGIES

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This thesis examined cognitive emotion regulation strategies in adolescence through two studies using a representative sample from Türkiye. Study 1 examined the use of five cognitive emotion regulation strategies (i.e., self-blame, rumination, catastrophizing, positive refocusing and reappraisal) across different school levels and genders. Moreover, the adaptiveness of the strategies was tested in relation to internalizing and externalizing problems by considering moderating role of school level and gender. Study 2 examined maternal antecedents of putatively maladaptive regulation strategies. Specifically, mothers' beliefs about shaming, and negative parenting behaviors, namely maternal rejection and psychological control were investigated as possible risk factors for maladaptive strategies. In light of the literature suggesting that parenting beliefs predict developmental outcomes through parenting behaviors, the mediating role of negative parenting behaviors in the relationship between mothers' shaming beliefs and maladaptive strategies was tested. Moreover, the school level and gender were examined as possible moderating factors in the mediation link. Study 1 revealed that maladaptive strategies increase as the school level increases, while some adaptive strategies decreases, especially for girls. Moreover, regardless of gender, positive reappraisal was negatively associated with internalizing problems in primary school. On the other hand, positive refocusing negatively but self-blame and catastrophizing positively predicted internalizing and externalizing problems in secondary school. Study 2 showed that mothers'

shaming beliefs predicted positively maternal rejection in primary and secondary school. Also, maternal rejection negatively predicted rumination, whereas psychological control positively predicted all maladaptive strategies in all school levels. The results were discussed in the light of the literature.

**Keywords:** Cognitive Emotion Regulation Strategies, Parenting Beliefs, Shaming, Negative Parenting

## ÖZ

# ERGENLİKTE BİLİŞSEL DUYGU DÜZENLEME STRATEJİLERİ: ANNELERİN AYIPLAMAYA İLİŞKİN İNANÇLARI VE OLUMSUZ EBEVEYNLİK DAVRANIŞLARININ UYUMSUZ STRATEJİLER ÜZERİNDEKİ ROLÜNÜN İNCELENMESİ

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Bu tezde, ergenlik dönemindeki bilişsel duygu düzenleme stratejileri Türkiye temsili bir örneklem kullanılarak iki çalışma aracılığıyla incelenmiştir. İlk olarak, Çalışma 1, beş bilişsel duygu düzenleme stratejisinin (kendini suçlama, ruminasyon, felaketleştirme, olumlu yeniden odaklanma ve yeniden değerlendirme) farklı okul seviyelerinde ve cinsiyetlerde kullanımını incelemiştir. Ayrıca, bilişsel duygu düzenleme stratejilerinin uyumsallığı, okul düzeyi ve cinsiyetin düzenleyici rolü göz önünde bulundurularak, içe yönelim ve dışa yönelim problemleriyle ilişkili olarak test edilmiştir. Çalışma 2 ise, uyumsuz varsayılan düzenleme stratejilerinin anne kaynaklı öncüllerini incelemiştir. Bu kapsamda, annelerin utandırmaya ilişkin inançları, anneden algılanan ebeveyn reddi ve psikolojik kontrol gibi olumsuz ebeveynlik davranışlarının risk faktörü olarak, uyumsuz stratejiler ile ilişkileri incelenmiştir. Özellikle, ebeveynlik inançlarının ebeveynlik davranışları aracılığıyla gelişimsel sonuçları yordadığını öne süren literatür ışığında, annelerin utandırma inançları ile uyumsuz stratejiler arasındaki ilişkide olumsuz ebeveynlik davranışlarının aracı rolü test edilmiştir. Ayrıca, okul düzeyi ve cinsiyet, öne sürülen aracılık bağlantısında olası düzenleyici faktörler olarak ele alınmıştır. Sonuçlara göre, Çalışma 1, okul seviyesi arttıkça uyumsuz stratejilerin arttığını, bazı uyumlu stratejilerin ise özellikle kızlar için azaldığını ortaya koymuştur. Ayrıca, cinsiyetten bağımsız olarak, olumlu yeniden değerlendirmenin ilkokuldaki içe yönelim



sorunları ile negatif ilişkili olduđu görülmüştür. Öte yandan, pozitif yeniden odaklanmanın negatif yönde; kendini suçlama ve felaketleştirmenin ise pozitif yönde ortaokuldaki içe yönelim ve dışa yönelim problemleri ile ilişkili olduđu bulunmuştur. Çalışma 2 ise; annelerin utandırma inançlarının ilkokul ve ortaokulda anne reddini pozitif yönde yordadığını göstermiştir. Ayrıca, anne reddi ruminasyonu negatif yönde yordarken, psikolojik kontrol tüm okul seviyelerinde tüm uyumsuz stratejileri pozitif yönde yordamıştır. Sonuçlar literatür ışığında tartışılmıştır.

**Anahtar Kelimeler:** Bilişsel Duygu Düzenleme Stratejileri, Ebeveynlik İnanışları, Utandırma, Olumsuz Ebeveynlik

*To my mother Sevdıye, and my children Mandalin and Günseli*

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## TABLE OF CONTENTS

PLAGIARISM .....	iii
ABSTRACT.....	iv
ÖZ .....	vi
DEDICATION .....	viii
ACKNOWLEDGMENTS .....	ix
TABLE OF CONTENTS.....	xi
LIST OF TABLES.....	xiv
LIST OF FIGURES .....	xv
LIST OF ABBREVIATIONS .....	xvi
GENERAL INTRODUCTION.....	1
STUDY 1 .....	4
2. 1. Introduction .....	4
2. 1. 1. Overview .....	4
2. 1. 2. Emotion Regulation.....	5
2.1.2.1. Definition of Emotion Regulation.....	5
2.1. 2. 2. Cognitive Aspects of Emotion Regulation.....	6
2. 1. 2. 3. Cognitive Emotion Regulation Strategies .....	8
2.1. 3. Adaptiveness of Cognitive Emotion Regulation Strategies.....	9
2.1.3.1. Associations with Internalizing Problems .....	10
2.1.3.2. Associations with Externalizing Problems .....	13
2.1.4. Individual Differences in Emotion Regulation.....	15
2.1.4.1. Developmental Phases of Adolescence.....	15
2.1. 4. 2. Gender .....	19
2.1. 5. The Aims of the Study 1 .....	22
2.2. Method.....	25
2.2.1. Participants .....	25
2.2.2.1. The Cognitive Emotion Regulation Questionnaire .....	27
2.2.2.2. Child Behavior Checklist , .....	28
2.2.3. Procedure .....	28
2.3. Results .....	29
2.3.1. Preliminary Analyses.....	29
2.3.2. Correlational Statistics.....	31
2.3.2.1. Correlations of Study Variables for Total Sample .....	31

2.3.2.2. Correlations of Study Variables for Each School Level and Gender .....	31
2.3.3. The Results for Testing School Level and Gender Differences in CERS.....	35
2.3.3.1. School-Level Differences in Cognitive Emotion Regulation Strategies .....	35
2.3.3.2. Gender Differences in Cognitive Emotion Regulation Strategies .....	40
2.3.3.3. The Interaction between School Level and Gender in CERS.....	41
2.3.4. The Results for Testing the Link between CERS and Problem Behaviors .....	41
2.4. Discussion .....	45
2.4.1. The Results on the Use of Cognitive Emotion Regulation Strategies.....	48
2.4.1.1. Results for School Level Effect .....	48
2.4.1.2. Results for Gender Effect .....	50
2.4.1.1. Results for Interaction Effect between School Level and Gender .....	51
2.4.2. Results on the Link Between CERS and Problem Behaviors .....	54
STUDY 2.....	61
3.1. Introduction.....	61
3.1.1. Overview.....	61
3.1.2. Emotion Socialization within the Family and Cultural Context .....	62
3.1.3. Parenting Beliefs and Culture .....	66
3.1.3.1. Parenting Beliefs in Türkiye .....	67
3.1.3.2. Parenting Beliefs about Shaming.....	69
3.1.3.3. The Role of Shaming Beliefs in Emotion Regulation .....	72
3.1.4. Parenting Behaviors .....	74
3.1.4.1. Rejection.....	75
3.1.4.2. Psychological Control.....	76
3.1.4.3. The Role of Negative Parenting in Emotion Regulation .....	77
3.1.4.4. The Role of Parenting Beliefs in Negative Parenting .....	80
3.1.5. Moderator Role of Developmental Phase and Gender.....	81
3.1.6. The Current Study .....	83
3.2. Method .....	86
3.2.1. Participants.....	86
3.2. 2. Measures .....	89
3.2.2.1. Child-Rearing Beliefs Questionnaire.....	89
3.2.2.2. The Parental Acceptance-Rejection Questionnaire .....	89
3.2.2.3. The Psychological Control Scale - Youth Self Report .....	89
3.2.2.4. Cognitive Emotion Regulation Questionnaire .....	90
3.2.3. Procedure .....	90
3.4. Results.....	90
3.4.1. Preliminary Analyses .....	90
3.4.2. Correlational Statistics .....	92
3.4.3. Main Analyses .....	93

3.4. 3. 1. The Results for Direct Paths.....	97
3.4. 3. 2. The Results for Moderation Paths.....	103
3.4. 3. 3. The Results for Moderated Mediation and Mediation Paths.....	108
3.5. Discussion.....	112
GENERAL DISCUSSION .....	123
4.1. Limitations and Future Directions.....	127
4.2. Strengths and Contributions to the Literature.....	129
4.3. Conclusion and Practical Implications .....	130
REFERENCES .....	132
A. APPROVAL OF THE METU HUMAN SUBJECTS ETHICS COMMITTEE.....	158
B. APPROVAL OF MINISTRY OF EDUCATION .....	159
C. CURRICULUM VITAE .....	160
D. TURKISH SUMMARY / TÜRKÇE ÖZET .....	163
E. THESIS PERMISSION FORM / TEZ İZİN FORMU .....	183

## LIST OF TABLES

Table 1. Demographic Characteristics of the Sample in Study 1 .....	26
Table 2. Descriptive and Correlational Statistics for Total Sample in Study 1 .....	33
Table 3. Correlational Statistics for Primary School Level in Study 1 .....	36
Table 4. Correlational Statistics for Secondary School Level in Study 1 .....	37
Table 5. Correlational Statistics for High School Level in Study 1 .....	38
Table 6. MANOVA Results: Gender and School Level Differences on CERS .....	39
Table 7. Post Hoc Comparisons for School Level and Gender Differences on CERS .....	40
Table 8. Regression Coefficients for Predicting Problem Behaviors .....	47
Table 9. Demographic Characteristics of the Sample in Study 2 .....	87
Table 10. Correlational Statistics for Primary School Level in Study 2 .....	94
Table 11. Correlational Statistics for Secondary School Level in Study 2 .....	95
Table 12. Correlational Statistics for High School Level in Study 2 .....	96
Table 13. The Results for the Direct and Moderated Pathways .....	104
Table 14. The Interaction between Mothers' Shaming Beliefs and Maladaptive CERS .....	106
Table 15. The Results for Moderated Mediation Pathways .....	109



## LIST OF FIGURES

Figure 1. The Interplay Between School Level and Gender on Rumination .....	42
Figure 2. The Interplay Between School Level and Gender on Catastrophizing.....	42
Figure 3. The Interplay Between School Level and Gender on Positive Refocusing .....	43
Figure 4. The Proposed Moderated Mediation Model .....	86
Figure 5. The Results for predicting Self-Blame at Primary School Level .....	98
Figure 6. The Results for predicting Rumination at Primary School Level.....	98
Figure 7. The Results for predicting Catastrophizing at Primary School Level .....	99
Figure 8. The Results for predicting Self-Blame at Secondary School Level .....	99
Figure 9. The Results for predicting Rumination at Secondary School Level.....	100
Figure 10. The Results for predicting Catastrophizing at Secondary School Level .....	100
Figure 11. The Results for predicting Self-Blame at High School Level .....	101
Figure 12. The Results for predicting Rumination at High School Level.....	102
Figure 13. The Results for predicting Catastrophizing at High School Level .....	102
Figure 14. The Interplay between Shaming Beliefs and Gender for Rumination.....	106
Figure 15. The Interplay between Maternal Rejection and Gender for Self-Blame .....	107
Figure 16. The Interplay between Shaming Beliefs and Gender for Rumination.....	107

## **LIST OF ABBREVIATIONS**

<b>CERS</b>	Cognitive Emotion Regulation Strategies
<b>CERM</b>	Cognitive Emotion Regulation Model
<b>CBCL</b>	Child Behavior Checklist
<b>PARQ</b>	The Parental Acceptance-Rejection Questionnaire

## CHAPTER 1

### GENERAL INTRODUCTION

Emotions play a central role in organizing social relations, providing motivational force for behaviors, and achieving many social and cognitive tasks in the developmental process (Abe & Izard, 1999). In this sense, how emotions operate and interact with cognitive (e.g., perception, memory and empathy) and behavioral systems (e.g., prosocial, internalizing and externalizing behaviors) have shed light on the literature for years to understand both normal and abnormal development (Izard et al., 2002). According to evolutionary theory (Darwin, 1872), all emotions experienced by individuals have a function for survival, so inherently adaptive. However, previous researches have shown that if type, frequency, or intensity of particular emotion does not compromise with the individual's long-term goals or specific context, emotions may result in negative outcomes (Thompson, 1994). In this case, the regulation of such emotion is necessary to maintain social and psychological functioning (Aldao et al., 2010; McLaughlin et al., 2011). For this reason, the ability to regulate one's own emotions is considered as an important developmental milestone.

From infancy, children begin to use certain strategies to regulate their emotional arousal, and over time these strategies diversify with advances in cognitive development (Cole et al., 2004). Namely, along with cognitive growth, regulation strategies become more complex and predominantly cognitively oriented especially during adolescence (Schafer et al., 2017). In this respect, adolescence is accepted as a key developmental phase in terms of emotion regulation. However, the adolescent brain undergoes many neural, hormonal, cognitive and social changes and development, leading to age-related patterns of development during adolescence (Spear, 2000). Therefore, examining the cognitive strategies that adolescents use in response to negative events, taking into account different phases of adolescence, is

particularly important to capture possible age-related manifestations in emotional regulation. In addition to age-related changes in emotion regulation, adolescence is also emphasized in terms of the emergence of gender differences in some emotion regulation strategies (Jose & Brown, 2008). Relatedly, some researchers argue that examining how boys and girls differ in emotion regulation can shed light on understanding the gender-biased prevalence of problem behaviors such as depression (Nolen Hoeksema, 1991). To this end, the first part of current thesis (*Study 1*) aimed to examine developmental phase and gender differences in cognitive emotion regulation strategies during adolescence. In addition, numerous research on cognitive emotion regulation strategies in relation to individuals' psychological functioning has revealed that not all strategies used to manage emotions are adaptive. That is, some of these strategies have been reported to increase the stress response rather than alleviate it (Chan et al., 2016; Verkuil et al., 2010). Accordingly, emotion regulation strategies are basically divided into two groups: adaptive and maladaptive strategies (Garnefski et al., 2001). Interestingly, in contrast to what has been extensively studied with adult samples, cognitive emotion regulation strategies have been relatively understudied in relation to problem behaviors during adolescence. Furthermore, it is largely unknown whether the findings reported for adult samples in terms of the relationship between cognitive regulation strategies and problem behaviors can be replicated at different phases of adolescence and across genders (e.g., Compas et al., 2017). Therefore, the second aim of Study 1 was to investigate the concurrent relationships between cognitive emotion regulation strategies and internalizing and externalizing problems during adolescence, taking gender and developmental phase into account.

Next, the second part (*Study 2*) of the thesis focused on parental antecedents of maladaptive cognitive emotion regulation strategies of (pre-)adolescents. In the literature, studies emphasize the pivotal role of parents in children's emotion regulation development (Morris et al., 2007). In this regard, established theories suggest that parents, through their culturally regulated child-rearing cognitions and parenting practices, construct their children's socialization context and thus influence their children's developmental outcomes (Super & Harkness, 1997). On this basis, Study 2 aimed to investigate the link between parenting beliefs, behaviors, and child outcomes in terms of maladaptive cognitive emotion regulation.

Previous studies showed that parents' beliefs about emotions guide parenting strategies and behaviors and thus influence child outcomes (Halberstadt et al., 2013; Trommsdorff & Friedlmeier, 2010). In line with this research, Study 2 specifically focused on mothers' beliefs about shaming as a culturally specific parenting strategy. In particular, because shame and negative parenting behaviors have been mostly associated with non-optimal emotional outcomes, mothers' beliefs about shaming and their rejecting and psychologically controlling behaviors were examined in relation to maladaptive cognitive emotion regulation strategies. Furthermore, based on the literature and the results of Study 1, the moderating role of developmental phase and gender were included in the proposed mediation model. In line with these objectives, the present thesis consists of two chapters, each devoted to one study and includes introduction, method, results and discussion sections of the relevant study.

## CHAPTER 2

### STUDY 1

#### 2. 1. Introduction

##### 2. 1. 1. Overview

When emotions do not align with personal goals or the environment, people are motivated to modify their current emotions (English et al., 2017). In this sense, effective emotion regulation is important for social, cognitive and psychological functioning and seen as a critical part of development (Aldao et al., 2010). Across life span development, emotional regulation strategies used by individuals develop and diversify in parallel with cognitive, social and physical growth (Gross et al., 2013). In particular, since adolescence is a period of life characterized by significant changes in emotional state and regulation due to changes in neurobiological, cognitive and socio-emotional domains (Hollenstein & Loughheed, 2013), lately many researchers interested in the science of emotion have focused on adolescence (Compas et al., 2017; Schäfer et al., 2017). Although various aspects of emotional development have been frequently studied with adolescent samples, there are few studies highlighting variability in cognitive emotion regulation strategies across the adolescence period.

Thus, the current study sought to identify possible differences in cognitive emotion regulation strategies across phases of adolescence (pre-, early and mid- adolescence) and between genders. based on a large body of evidence demonstrating (a) age and gender differences in emotion regulation (Nolen-Hoeksema, 2012; Zimmermann & Iwanski, 2014), (b) the role of emotion regulation strategies on internalizing and externalizing problems (Kraft et al., 2023). Hence, firstly, it was aimed to examine whether the use of cognitive emotion regulation strategies varies depending on school levels, gender and the interaction between two. Secondly, it was aimed to examine the associations between cognitive emotion regulation strategies (i.e., self-blame, catastrophizing, rumination, positive reappraisal and refocusing) and adolescents' internalizing and externalizing problems, by considering phases of adolescence and adolescent's gender. To this end, the theoretical and empirical bases of the

present study was summarized in the following sections. Then, the current results were reported and the findings were discussed in the light of the literature.

## **2. 1. 2. Emotion Regulation**

In this part of the thesis, the theoretical framework of cognitive emotion regulation was explained in detail. First, emotions and emotion regulation were defined. Then, in the light of existing models in the literature, the emotion regulation process was explained, focusing on its cognitive aspects. Finally, cognitive strategies for emotion regulation were described.

### **2.1.2.1. Definition of Emotion Regulation**

Since emotion is the focus of diverse disciplinary fields such as psychology, sociology, philosophy and anthropology (Gross, 1998), there has not been a consensus on definition of emotion. Nevertheless, it is important to clearly operationalize what emotion is before dwelling on emotion regulation (Gross, 1998). Davidson and colleagues (1994) defined emotion as processes including physiological and behavioral changes occurred in response to internal or external situations or things. Alternatively, Gross and Thompson (2007) conceptualized emotion as multifaceted phenomenon which comprise of experiential, perceptual and motivational processes leading to coordinated changes in behavior, physiology and subjective experience/feelings. By combining these two approaches, emotions can be broadly defined as a system of reactions to certain objects, events, and even to individuals' own internal experiences, consisting of various mental and physical processes. In line with this conceptualization of emotion, emotion regulation has been examined in the literature as a multicomponent process involving various physiological, behavioral and cognitive aspects in order to manage emotional response (Garnefski et al., 2001). Accordingly, the most comprehensive and well-known definition of emotion regulation is “the extrinsic and intrinsic processes responsible for monitoring, evaluating, and modifying emotional reactions, especially their intensive and temporal features, to accomplish one’s goals” (Thompson, 1994, pp. 27–28).

Individuals use various emotion regulation strategies to change their emotional state. In this sense, emotion regulation strategies refer to the practices used by individuals to modify the magnitude, duration, experience and expression of emotions (Gross, 1998; Gross & Thompson, 2007). In this context, people are usually motivated to downregulate their negative emotions, although sometimes they also need to modulate their positive emotions towards a goal (e.g. conforming to social norms) (Gross, 2013). However, in the present thesis emotion regulation, and therefore regulation strategies, have been addressed only as the regulation of

negative emotions. In addition, as mentioned above, the process of experiencing and regulating emotion itself involves cognitive, physiological and behavioral elements. Accordingly, emotion regulation strategies are categorized differently in the literature as *cognitive* (e.g., cognitive reappraisal), *behavioral* (e.g., suppression), *physiological* (e.g., biofeedback) and *experiential* (e.g., approaching affective experience) (Gross et al., 2006). On this basis, this study focused only on cognitive aspects of emotion regulation and cognitive strategies, which were described in detail under the following headings.

### **2.1. 2. 2. Cognitive Aspects of Emotion Regulation**

According to appraisal theory (Roseman & Smith, 2001), individuals may evaluate the situations in different ways, and how they appraise a personal experience or event is crucial for understanding and predicting its emotional outcomes. This cognitive perspective suggests that individuals subjectively perceive circumstances and assess them with respect to several criteria such as novelty, valence, personal goals, norms and agency (who caused it: self or others?). Then, the type and intensity of emotion derived from the experience is determined as a result of this subjective interpretation process (Ellsworth & Scherer, 2003). For example, a person who received a low grade in an exam may interpret this as a result of not studying enough and as a personal failure, while another person may interpret the same situation as a teacher's low grade and unfairness. Therefore, the first person may experience shame and the second person anger, even though they have had the same experience. Together, considering this intertwined relationship of cognition with emotional experience, it is conceivable that cognitive processes would play a pivotal role in emotion regulation, as well. There are two widely used models in the literature that explain emotion regulation process through cognition: The Process Model of Emotion Regulation (Gross, 1998) and Cognitive Emotion Regulation Model (Garnefski et al., 2001).

In the Process Model of Emotion Regulation, Gross (1998, 2013) conceptualized the emotion regulation as an information-processing approach. According to this model, there are five sequential steps involved in emotion formation, and emotional regulation can occur in any of them. The first step which called *situation selection* is defined as individuals' strategies to avoid or approach situations that they anticipate will result in a certain emotion (Gross, 1998). Gross and Thompson (2007) argued that this strategy highly relies on individual's cognitions such as remembering the past (i.e., emotional response to event in the past) and predicting the future (i.e., expected emotional response to upcoming event). That's why, due to backward- and forward-looking biases on memory, situation selection may not be used effectively for the purpose of intrinsic emotion regulation (i.e., regulation of one's own emotions). Rather, it can



be used frequently in early phases of life, when the parents need to regulate offspring's emotions (i.e., external emotion regulation).

The second step, *situation modification* involves individual's attempt to make some revisions in the emotion-eliciting situation in order to decrease its emotional impact. Indeed, it is similar to problem-focused coping strategies in the coping literature (Gross, 1998). In this sense, it may be considered that this strategy requires an advanced level of planning and implementation skills. Thirdly, *attentional deployment* includes strategies aimed at redirecting the focus of attention. Gross (1998) stated that attentional deployment may be thought as selection of new internal situations to modulate emotional response. In this regard, Gross and Thompson (2007) identified two strategies depending on whether attention was diverted away from the emotion-eliciting situation (i.e., distraction) or focused on it (i.e., concentration or rumination). The fourth step is *cognitive change*, which involves cognitive efforts to change the way one evaluates the situation to reduce its emotional impact. A strategy of particular focus in the model is cognitive reappraisal, which refers to changing the personal meaning of the experience to alleviate its emotional load (Gross, 1998; Gross & Thompson, 2007). Finally, *response modulation* step involves strategies (e.g., behavioral suppression) that person applies to change physiological, experiential or behavioral components of the emotional response after it has occurred (Gross, 1998). In this sense, it can be argued that the strategies used in the response modulation phase aim to change the expression of a particular emotion rather than its cognitive experience.

Gross's process model is one of the most commonly used and validated model in the emotion literature. However, as mentioned above, although the process model addresses various cognitive aspects of emotion regulation, the model's measurement scale covers a limited number of strategies, in particular only cognitive reappraisal as a cognitive strategy. In addition, in the process model, the identified regulation strategies are aimed directly and consciously at changing the valence of emotion itself (e.g., to feel more positive or less negative) or its expression, regardless of the situation that triggers it (e.g., challenges vs opportunities). In this respect, a cognitive model of emotion regulation based on appraisal theories, similar to the process model, has been developed in relatively recent years.

In the Cognitive Emotion Regulation Model (CERM), Garnefski and colleagues (2001) conceptualized the emotion regulation as a type of coping process that individuals use to handle negative or stressful situations. According to this model, the emotion regulation process includes different components, especially cognitive (e.g., thinking) and behavioral (e.g., acting

out) aspects, and contrary to what is commonly used in the literature, the model suggested that these two components should be separately examined.

Namely, researchers who adopt the CERM view cognitive processes (i.e., appraisals) as antecedents of behavioral processes and, therefore, emphasize the importance of focusing primarily on these cognitive processes in terms of emotion regulation (Garnefski et al., 2001). In this line of research, the Cognitive Model of Emotion Regulation addresses specifically how individuals manage their emotion-cognition processes when faced with internal or external challenges. In other words, the model does not conceptualize emotion regulation as directly changing the valence of emotion. Instead, it examines individual differences in habitual ways of thinking about threatening or stressful experiences. Ultimately, the model suggests that how individuals think about challenging experiences plays a predictive role for their emotional responses to these experiences (e.g., Mazaheri et al., 2016; Wytykowska et al., 2021). Within the scope of the model, Garnefski and colleagues (2001) identified nine cognitive regulation strategies, which are described in detail under the next heading.

### **2. 1. 2. 3. Cognitive Emotion Regulation Strategies**

In the literature, nine conceptually distinct cognitive emotion regulation strategies are defined based on the ways individuals think about a negative or stressful experiences. These strategies are self-blame, other-blame, rumination, catastrophizing, acceptance, positive refocusing, positive reappraisal, refocus on planning, putting into perspective.

Firstly, *self-blame* refers to individuals' cognitive attributions that they are responsible for the causes and consequences of their negative experiences (e.g., “I think that it’s all caused by me”). On the other hand, *other-blame* refers to thoughts that someone else is responsible for what has happened to you (e.g., “I think that it’s the fault of others”). Thirdly, *rumination* refers to repetitively dwelling on one’s own feelings and thoughts in relation to negative experience (e.g., “I often think of how I feel about what happened”). Fourth, *Catastrophizing* is defined as thoughts that focus on the negativity of an experience (e.g., “All the time, I think that this is the worst thing that can happen to you”). Next, *acceptance* refers to the thoughts of accepting what has happened to one and resigning from striving to change them (e.g., “I think that I can’t do anything about it”). Sixth, *positive refocusing* is defined as shifting one's focus away from what has happened to one and thinking about better things. (e.g., “I think of nicer things that have nothing to do with it). Seventh, *positive reappraisal* is defined as reinterpretation of the negative experience as an opportunity for personal growth (e.g., “I think that I can learn from it). Next, *refocus on planning* refers to actively thinking about how to strive to change and control what happened to one (e.g., “I think of how I can change it”).

Lastly, putting into perspective refers to cognitive attempts to reduce negativity of the current experience by focusing on more negative experiences that could be happened (e.g., “I think that it’s not as bad as other things that could happen”) (Garnefski et al., 2001).

Previous research has shown that some of these cognitive strategies play an important role in the development and maintenance of problem behaviors (e.g., depression), while others play an important role in their prevention (e.g., Aldao et al., 2010; Nolen Hoeksema, 1991; Schäfer et al., 2017). In this sense, it would be ideal to focus on each one individually. However, the current study was conducted as a part of a nationwide project that examine diverse psychosocial factors in relation to child development. Within the scope of the project, it was thought that keeping the number of questions to be asked to children at an optimum level would be very important in terms of the quality of the data. That’s why, not all emotion regulation strategies were included in this study. Instead, only certain emotion regulation strategies were focused on. In particular, in accordance with the general objectives of the project, only five cognitive emotion regulation strategies that were previously found to be related to problem behaviors in adolescent samples (Garnefski et al., 2005; Garnefski & Kraaij, 2006), were included in the study 1. Namely, these cognitive strategies are rumination, self-blame, catastrophizing, positive reappraisal and positive refocusing. In the literature, depending on their relationship with various problem behaviors, the first two is referred to as adaptive strategies, while the remaining three are referred to as maladaptive or unadaptive strategies (Garnefski et al., 2004; Wytykowska et al., 2021). In the next section, the adaptiveness of these cognitive strategies will be elaborated based on previous findings reported in the literature in relation to internalizing and externalizing problems.

### **2.1. 3. Adaptiveness of Cognitive Emotion Regulation Strategies**

Some researchers have suggested that because cognitive process comes earlier than behavioral responses of emotions, cognitive strategies (e.g., reappraisal) are more effective than behavioral ones (e.g., behavioral suppression) in managing negative emotions (Gross, 2013). However, numerous empirical findings have shown that not all cognitive emotion regulation strategies are helpful in reducing negative emotions and thus improving psychological outcomes (e.g., Mazaheri et al., 2016; Wytykowska et al., 2021). In this context, it has been shown that adaptive cognitive strategies are associated with the reduction of emotional symptoms, whereas maladaptive strategies are associated with the onset or maintenance of problem behaviors (Nolen-Hoeksema, 1991). In the current study, the adaptiveness of regulation strategies was examined in relation to their associations with problem behaviors, namely internalizing and externalizing problems.

In the next headings, the existing literature was reviewed in terms of whether cognitive strategies examined in this study (i.e., rumination, self-blame, catastrophizing, positive reappraisal and positive refocusing) are adaptive with respect to their implications for internalizing and externalizing behaviors in adolescence.

### **2.1.3.1. Associations with Internalizing Problems**

Internalizing problems are broadly characterized by disturbances in inner-directed emotions like sadness, fear, guilt and worry (Zahn–Waxler et al., 2000), and includes specifically anxiety disorders and depression. In this sense, it has been suggested that internalizing symptoms involve the processes that are underregulation of negative emotions such as shame, guilt, sadness and fear but overregulation of positive emotions such as happiness (Barrett, 2013). In fact, this close relationship between emotion regulation and internalizing problems, which comes from its definition, has been empirically demonstrated by numerous studies in the literature. However, in order to develop effective prevention and intervention programs for risk groups, it is particularly important to examine this relationship during developmental periods such as adolescence when a significant increase in internalizing problems is observed. Therefore, theoretical models and previous studies explaining how cognitive emotion regulation strategies may be related to internalizing problems, especially in children and adolescents, are detailed below.

In the most general sense, Beck's cognitive theory suggests that negative attributions are highly associated with the internalizing problems because such thinking process leads to development of maladaptive schemas about the self, the world and the future (Beck, 1967). In support of this theory, many studies in the literature have shown that self-blame, rumination and catastrophizing strategies, which are largely composed of negative attributional styles, positively predict internalizing problems in children and adolescents (e.g., Garnefski & Kraaij, 2018; Kraaij & Garnefski, 2012; Kraft et al., 2023; Tanzer et al., 2020). Following the same logic, on the other hand, strategies such as positive reappraisal and refocusing, which refer to more positive thought attributions or changing the negative focus, are expected to negatively predict internalizing problems (Garnefski et al., 2001). However, each strategy has its own characteristics and is hypothesized to contribute differently to psychological well-being. Therefore, their relationship to internalizing problems is more specifically addressed separately.

With regard to *self-blame*, the cognitive vulnerability model suggests that biased self-attributions to a stressful or negative life event trigger negative cognitions such as helplessness and inadequacy.

Accordingly, it has been suggested that seeing oneself responsible for a negative experience increases the risk of internalizing problems through this pathway (Evans et al., 2022; Kouros et al., 2020). To date, empirical studies examining the link between self-blame and internalizing problems in children and adolescents have generally focused on specific uncontrollable stressors such as inter-parental conflict (e.g., Evans et al., 2022; Lucas-Thompson et al., 2017), peer victimization (e.g., Perren et al., 2013; Yang et al., 2022), maltreatment/abuse (e.g., De Champlain et al., 2023; McGee et al., 2001), and maternal depression (e.g., Kouros et al., 2020). The common findings of these previous studies suggest that children and adolescents who blame themselves for a specific negative experience are more likely to have internalizing disorders such as anxiety and depression. Interestingly, relatively little research has focused on the consequences of habitual use of self-blame as an emotion regulation strategy in child and adolescent samples (e.g., Garnefski et al., 2002, 2005; Tanzer et al., 2020; Zhuang et al., 2020). Nevertheless, the findings of these studies appear to be consistent with the aforementioned studies.

*Rumination* involves the process of thinking about one's negative experiences or emotions in a repetitive and passive manner without an active attempt to cope. In this context, it has been suggested that ruminative thinking prevents individuals from taking action to solve their problems and thus alleviate negative mood. Rather, studies have shown that repeatedly dwelling on one's own negative emotions are associated with increased intensity of negative emotions and prolonged distress (Nolen-Hoeksema et al., 2008; Volkaert et al., 2020). Therefore, rumination is generally recognized as a risk factor for developing problem behaviors, especially internalizing. (McLaughlin et al., 2014). In this respect, response style theory (Nolen-Hoeksema, 1991) has proposed three possible pathways from rumination to depression. First, when individuals use ruminative thinking to make sense of what they have experienced, the negative emotions and memories associated with the negative event are further activated, which can increase one's depressed mood. Second, because rumination is an inherently passive and perseverative thought process, it can interfere with active problem solving to cope with stressors and thus exacerbate pessimistic and depressive thinking. Finally, excessive preoccupation with one's own thoughts and feelings may lead to less social support for individuals with rumination habits, and this social isolation may increase the risk of depression (Nolen-Hoeksema & Davis, 1999). In support of this view, numerous studies have found significant positive associations between rumination and internalizing problems. Specifically, in a recent meta-analysis, Kraft and colleagues (2023) reported large effect sizes for the relationship between rumination and internalizing problems in children and adolescence.

*Catastrophizing* is regarded as disrupted cognitions which involve focusing on the most negative aspects of circumstances. That is, individuals who frequently engage in catastrophizing tend to overestimate threat and harm that associated with negative event (Garnefski & Kraaij, 2018). How catastrophizing influence physical and mental health has been widely studied, especially in the pain literature. Accordingly, robust evidence showed that catastrophizing on one's somatic complaints or pain predicted greater pain intensity or increased complaints in children and adolescence (e.g., Birnie et al., 2016; Fisher et al., 2018). Through catastrophizing, the negativity of situations is exaggerated and this leads to the perception of negative life events as less controllable and manageable (Zhuang et al., 2020). As a result, catastrophizing is thought to increase feelings of helplessness in the face of events or stress by preventing individuals from actively dealing with their problems, and therefore predict depression (Kaminsky et al., 2006). In addition, for individuals who chronically use catastrophizing, negativity bias is not limited to current experiences. Rather, it is argued that the catastrophizing style of thinking also leads one to prejudicially think about the worst possible outcomes of future experiences (Chan et al., 2015). Therefore, in the literature, catastrophizing strategy has been argued to be particularly associated with anxiety problems (Garnefski & Kraaij, 2018). In line with these, a growing body of research has provided empirical evidence for the positive link between catastrophizing strategy and internalizing problems in children and adolescent samples (Garnefski et al., 2002; Li et al., 2015; Melero et al., 2021; Noel et al., 2012; Rey Peña & Extremera Pacheco, 2012; Rawana & Kohut., 2012; Öngen, 2010; Zhou et al., 2019).

*Positive reappraisal* refers to changing negative cognitions by attributing a more positive meaning to one's negative experience, while *positive refocusing* involves the process of distracting one's attention away from negative circumstances (Garnefski et al., 2001). In this respect, it may be thought that reappraisal and refocusing reflect a more positive attributional style in coping with stressors. As a result, in contrast to self-blame, rumination and catastrophizing strategies, researchers have suggested that positive reappraisal and refocusing enable to reduce negative emotions and increase positive emotions (Gross & John, 2003; Volkaert et al., 2020). That's why, it is generally hypothesized in the literature that these two strategies would be negatively related to internalizing problem behaviors. However, previous studies have yielded inconsistent findings concerning this hypothesis. Specifically, for positive reappraisal, although there are empirical evidence supporting negative link in relation to internalizing behaviors in children and adolescence (e.g., Garnefski et al., 2005; Karnilowicz et al., 2022; Schäfer et al., 2017; Zhuang et al., 2020), there are also studies that found no or weak association of reappraisal with internalizing problems (Compas et al., 2017).

In fact, in a very recent meta-analysis, Kraft and colleagues (2023) reported that cognitive reappraisal was significantly associated with depression but with a small effect size, whereas its relationship with anxiety problems was not significant in children and adolescents. Similarly, for refocusing, some researchers have stated that shifting one's attention away from the adverse event has a positive effect on one's psychological functioning (e.g., Garnefski & Kraaij, 2006, 2018; Öngen, 2010; Volkaert et al., 2020), while others have reported findings that it does not have a positive impact (Compas et al., 2017; Garnefski et al., 2002, 2005) and may sometimes even negatively influence one's mental health when it takes the form of disengagement (e.g., de France & Evan, 2021; Wolgast & Lundh, 2017). In this sense, researchers suggest that refocusing, as opposed to rumination, may elevate mood in the short term by distracting attention from the negative situation (Volkaert et al., 2020); however, habitual use of this strategy may interfere with active coping strategies (e.g., cognitive reappraisal) that are more effective in dealing with stressors (de France & Evan, 2021). Taken together, the literature findings are mixed with regard to adaptiveness of positive reappraisal and refocusing strategies, and further research is needed to clarify the relationship between trait-level usage of positive reappraisal and refocusing and internalizing problems in children and adolescence.

### **2.1.3.2. Associations with Externalizing Problems**

Externalizing problems refers to a set of behavioral manifestations that lead an individual to violate the rights of others and experience conflict with social norms and authority figures (American Psychiatric Association, 2013). Unlike internalizing problems, which are directed at the self, externalizing problems (e.g., conduct disorder and oppositional defiant disorder) are primarily directed at the external environment and involve outward behaviors and emotions such as aggression, hostility, delinquency and defiance (Eisenberg et al., 2017). Since these problems somehow involve emotional and cognitive disturbances or distortions, their close relationship with the emotion regulation has been frequently mentioned in the literature. In this sense, the existing findings have especially emphasized on disturbances in the regulation of two emotions: under-regulation of anger and excessive down-regulation of guilt (Barrett, 2013). Nevertheless, compared to studies concerning internalizing problems, there are relatively few studies examining exclusively cognitive emotion regulation strategies in relation to externalizing problems in children and adolescence.

General Aggression Model stated the interplay between individual's internal state and their cognitive appraisals to situations predict likelihood of aggressive behaviors (Anderson & Bushman, 2002).

Accordingly, any affect, cognition or arousal that arises in response to a negative situation is subjected to a series of cognitive interpretation processes. In this thinking process, the way in which a person perceives and interprets the situation or its expected outcomes (e.g., hostile attribution bias) plays an important role in determining the manner of behavior given in response to situations (Allen et al., 2018). On the basis of this model, it is expected that maladaptive emotion regulation strategies, characterized by negative attributional style, would predict greater externalizing behaviors (e.g., Liu et al., 2023). On the other hand, since adaptive strategies aim to change the emotional impact or meaning of a situation in a more positive way, they would be negatively related to externalizing problems (Navas-Casado et al., 2023). Indeed, this hypothesis has been supported by numerous studies in child and adolescent samples. Importantly, empirical evidence showed noticeable comorbidity between internalizing and externalizing problems (Garnefski et al., 2005; Zahn–Waxler et al., 2000). Perhaps for this reason, in overall, the findings of studies examining the relationship between cognitive emotion regulation strategies and externalizing problems have been largely in parallel with those reported for internalizing problems (e.g., De Champlain et al., 2023; McLaughlin et al., 2014; Karnilowicz et al., 2022). Nonetheless, there are also studies that found unique patterns for externalizing problems. For example, Kallay and Cheie (2022) reported that cognitive maladaptive emotion regulation strategies (e.g., rumination, catastrophizing and self-blame) positively predicted both internalizing and externalizing problems, while adaptive strategies (e.g., positive refocusing and positive reappraisal) negatively predicted internalizing but not externalizing problems. In another study, Garnefski et al. (2005) found that self-blame, rumination and positive reappraisal were related to internalizing problems, whereas externalizing problems were significantly associated only with positive refocusing in adolescence. Taken together, considering the previous findings, although adaptive strategies are expected to be negatively related to externalizing problems and maladaptive strategies are expected to be positively related to externalizing problems, more studies are needed to clarify which strategies specifically predict externalizing problems in children and adolescent samples.

To summarize, previous studies examining the link between cognitive emotion regulation strategies and problem behaviors in adolescence have yielded inconsistent results, particularly that strategies known to be adaptive did not consistently predict internalizing and externalizing problems (Kraft et al., 2023; Zhuang et al., 2020). Moreover, although more consistent findings were revealed for maladaptive strategies in terms of problem behaviors in general, there are also studies in which an effect found specifically for one emotion regulation strategy could not be replicated in another study.



For example, catastrophizing positively predicted internalizing problems among adolescents in Pena et al. (2012)'s study but not in the study of Garnefski et al. (2005). Adolescence is a developmental period in which rapid changes are experienced. Therefore, despite all of these studies included adolescent samples, individual differences such as developmental level or gender may be responsible for these inconsistent findings in previous studies. These individual differences in relation to cognitive emotion regulation will be addressed in the next section.

#### **2.1.4. Individual Differences in Emotion Regulation**

Along with many neural, hormonal, cognitive and social changes and development, significant age-related manifestations are observed throughout development (Chiasson et al., 2017; Spear, 2000; Zimmermann & Iwanski, 2014). As these changes are most pronounced during adolescence, it is a critical time for researchers to study individual differences in various developmental areas. In particular, in terms of the development of emotion regulation skills, adolescents become more autonomous and add more complex cognitive strategies to their repertoire (Duarte et al., 2015). Although biological maturation and cognitive growth are remarkable, they occur gradually throughout adolescence, leading to variability across different phases of adolescence (Silvers et al., 2012; Spear, 2000). However, previous studies on cognitive emotion regulation strategies mostly examined adolescence as a whole and compare it with other phases of life (e.g., childhood, adulthood). In contrast, little is known about cognitive emotion regulation strategies at different phases of adolescence. Moreover, numerous research emphasized the gender differences in terms of emotional processes in adolescent samples (Budziszewska & Hansen, 2020; Perchtold et al., 2019; Sanchis-Sanchis et al., 2020; Zahn-Waxler et al., 2008). Therefore, the current study (Study 1) examined cognitive emotion regulation strategies, taking into account different phases of adolescence and gender. In addition to emerging differences in emotion regulation, the links between emotion regulation strategies and problem behaviors may also vary depending on developmental phase and gender. That is, a particular strategy that found adaptive for one developmental phase or gender may be either neutral or maladaptive for other phases or gender (Compas, et al., 2017). Therefore, in this study, the associations of cognitive emotion regulation strategies with problem behaviors were investigated considering different phases of adolescence and gender.

##### **2.1.4.1. Developmental Phases of Adolescence**

In the literature, there is no consensus on when adolescence begins and ends. Nevertheless, it is generally accepted that adolescence begins with puberty and ends in a more uncertain period when adult roles and identity are internalized (Gowers, 2005). According to social and

cognitive developmental phases, adolescence is usually divided into four phases: preadolescence (9-11 years), early adolescence (12-14 years), middle adolescence (15-17 years) and late adolescence (18-20 years) (Chiasson et al., 2017). With respect to cognitive emotion regulation development, the current study focused on pre-adolescence to mid-adolescence, which corresponds to the school-age group. In this scope, the phases of adolescence were divided not on the basis of age but on the basis of school level, which almost coincides with the age distributions reported above. The distinction based on school level was preferred for two reasons. First, there is a great deal of variation in age criteria between previous studies that have differentiated the phases of adolescence by age. This makes it difficult to determine the age cut-offs between the phases of adolescence. Secondly, it is very possible for children of similar age to be at different school levels. In fact, school transitions bring with them a number of changes in academic and psychological domains, seen as a part of adolescent development (Anderman & Mueller, 2010; Eccles & Roeser, 2011). In this case, school level may be more predictive criteria to differentiate developmental phases instead of age. As a result, the current study examined cognitive emotion regulation strategies in pre-adolescence, early adolescence, and middle adolescence, across three school levels: primary (3<sup>th</sup> and 4<sup>th</sup> grades), secondary (5<sup>th</sup> to 8<sup>th</sup> grades), and high school (9<sup>th</sup> to 11<sup>th</sup> grades), respectively. In the next sections, existing literature will be reviewed with respect to developmental variations in the use of cognitive emotion regulation strategies as well as their relationships with internalizing and externalizing problems.

#### **2.1.4.1.1. The Use of Emotion Regulation Strategies**

During adolescence, in parallel with the activity and maturation in different areas of the brain (e.g., prefrontal cortex, striatum and amygdala), significant developmental changes are observed in emotion regulation skills (Hollenstein & Loughheed, 2013). The fact that the prefrontal cortex, which plays a critical role especially in the control of emotional stimuli, develops significantly during this period enhance substantially emotion regulation capacities of adolescents (McRae et al., 2012). Moreover, cognitive advances such as abstract reasoning and effortful control enable adolescents to incorporate a variety of cognitive emotion regulation strategies into their emotion regulation repertoire (Garnefski et al., 2007; Sabatier et al., 2017). In this sense, from pre-adolescence to late adolescence emotion regulation are expected to become more effective. In support this view, McRae and colleagues (2012) found that compared to younger counterparts, older adolescents are better at using adaptive emotion regulation strategies (e.g., reappraisal) that involve more complex cognitive processes than younger adolescents (McRae et al., 2012). Similarly, a number of studies demonstrated that

adaptive emotion regulation tends to increase and maladaptive emotion regulation tends to decrease as adolescents get older (Gullone et al., 2010; McRae et al., 2012; Silvers et al., 2012).

On the other hand, adolescence is a period of life in which many emotional and social crises occur in addition to important neurological and cognitive gains. Namely, the desire for independence, separation from the family-oriented social environment for new peer-oriented social interactions, concerns about romantic relationships and various academic challenges, which are the major themes of adolescence, often cause adolescents to become emotionally aroused (Eccles, 1999; Powers & Casey, 2015). Indeed, extensive body of research have reported increased emotional reactivity and sensitivity to socioemotional cues during adolescence (Casey et al., 2008; Casey & Caudle, 2013). Meanwhile, since the prefrontal cortex is developing but still immature, adolescents' cognitive processes are significantly affected by emotional stimuli and stressors compared to adults (Casey et al., 2008; Spear, 2000). In parallel with this issue, Casey and Caudle (2013) demonstrated that although adolescents' self-regulation skills were comparable to adults on neutral tasks, their performance on emotionally salient tasks was significantly lower. Given this perspective, as socioemotional challenges increase with age, adolescents might be expected to use intensively inefficient/maladaptive strategies to regulate their emotions in response to stressors. However, in overall, even though more research is needed to clarify differences in emotion regulation across adolescence, the few existing studies point to the possibility of quadratic rather than linear pattern during adolescence. That is, their findings revealed a maladaptive shift in emotion regulation, showing an increase in maladaptive strategies but decrease in adaptive strategies in early adolescence between the ages of 12 and 15 (Cracco et al., 2017; Zimmermann & Iwanski, 2014). However, it should be noted that previous studies have mostly addressed various strategies without distinguishing between behavioral or cognitive regulation strategies. However, cognitive strategies may show different developmental trajectories than behavioral ones (e.g., te Brinke et al., 2021). Thus, maladaptive shift during adolescence reported for emotional regulation strategies may not be observed particularly cognitive strategies. Rather, in parallel with cognitive development, cognitive strategies can be expected to be increasingly involved in the lives of adolescents. Indeed, when the previous results are refined for cognitive strategies only, the findings indicate that cognitive emotion regulation strategies increase with age for both adaptive (Gullone et al., 2010; McRae et al., 2012; Silvers et al., 2012) and maladaptive strategies (Cracco et al., 2017; Zimmermann & Iwanski, 2014). Similarly, Garnefski and colleagues (2006) reported an increase in the use of all cognitive regulation strategies from early to middle adolescence, regardless of their adaptiveness.

Nevertheless, previous studies focusing exclusively on cognitive strategies are scarce and have mostly addressed specific strategies (i.e., mostly rumination and reappraisal). Therefore, further research is needed to test the hypothesis regarding maladaptive shift in cognitive strategies across adolescence. To this end, study 1 aims to investigate the use of cognitive emotion regulation strategies (i.e., self-blame, rumination, catastrophizing, positive refocusing and reappraisal) at different developmental phases of adolescence (i.e., pre-, early, and mid-adolescence).

#### **2.1. 4. 1. 2. The Link between Emotion Regulation Strategies and Problem Behaviors**

The general consensus is that the inability to effectively regulate emotions increase the risk for several forms of psychopathology such as internalizing (e.g., depression, anxiety) and externalizing problems (e.g., aggression, rule breaking) (Compas et al., 2017; McLaughlin et al., 2011; Silk et al., 2003). Adolescence is considered a particularly sensitive period in terms of the development or increase of such problems (Power & Casey, 2005; Spear, 2000). Therefore, examining the emotional regulation from a developmental perspective is thought to contribute to the understanding of the increasing trends in internalized and externalized problems during adolescence. In this respect, it has been suggested that the time gap between increased reactivity in the emotional system and maturation of the regulatory system (i.e. the frontal lobes) may explain this vulnerability to psychopathology during adolescence (Powers & Casey, 2015). According to Steinberg (2005), many changes in arousal and motivation occur in early adolescence in relation to puberty and hormonal changes, leading the adolescent brain to become sensitive to especially social stimuli and rewards. However, the prefrontal lobe responsible for the regulation of emotions, which will reach maturity in late adolescence, is not yet fully functioning. Therefore, with increasing socio-emotional challenges, youths, especially in early and middle adolescence, appears to be at risk of developing emotional and behavioral problems due to inefficient emotion regulation (Powers & Casey, 2015; Steinberg, 2005).

This conceptual framework provides an insight that the association between cognitive emotion regulation strategies and externalizing and internalizing problems would probably change across developmental phases of adolescence. Accordingly, it may be possible that a particular strategy consistently emerges as a risk or protective for emotional disorders at later phases of adolescence because of two reasons. Firstly, cognitive emotion regulation strategies may be less available in the earlier phases of adolescence as they involve complex cognitive processes and thus require a higher order level of cognitive development (Zimmer-Gembeck, & Skinner, 2016).

Indeed, there is a growing literature showing that the use of cognitive strategies during adolescence increases with age (Cracco et al., 2017; Garnefski et al., 2006; Silver et al., 2012, but except for Watts & Weems, 2006). Hence, as cognitive strategies are used less at younger ages, their impact on problem behaviors may be less observable, especially in pre-adolescence. Secondly, stability in the cognitive attributions to negative events can develop over time (Cole et al., 2008). That is, the association between the stressful experience and the particular way of thinking, which over time can become a learned tendency to manage emotions (Watkins & Nolen-Hoeksema, 2014). Therefore, using of a particular strategy may be associated with onset or prevention of psychopathology when it takes the form of habitual (trait-like) rather than situational (state-like) strategy. Previously reported findings in the literature are in line with the assumption that efficacy of specific emotion regulation strategies would increase with age (above the age of 11), at least for certain strategies such as rumination (Rood et al., 2009) and reappraisal (Compas et al., 2017). Given the aforementioned conceptual framework and empirical evidence from previous studies, this study aims to examine whether the relationship between cognitive emotion regulation strategies and internalizing and externalizing problems differs within the developmental phases of adolescence.

#### **2.1. 4. 2. Gender**

Existing studies on emotion in the literature indicate that adolescence is a critical period in terms of the emergence of gender differences in emotion regulation as well as emotional disturbances (Jose & Brown, 2008). Research in this field argues that certain emotion regulation strategies are used more frequently by a particular gender, which plays an important role in explaining gender differences in mood disorders, especially depression (Nolen-Hoeksema, 1991). In relation to this issue, this section examined gender differences in the literature with regards to cognitive emotion regulation and the link between emotion regulation and problem behaviors, namely internalizing and externalizing problems, respectively. Since previous findings yielded that gender differences start to be observed especially from a certain period of adolescence (i.e., early adolescence), the literature was reviewed by taking into account the developmental levels of adolescents.

##### **2.1. 4. 2.1. The Use of Emotion Regulation Strategies**

Accumulating empirical evidence has shown that there are significant gender differences in emotion regulation (Nolen-Hoeksema, 2012). However, it has been argued that these gender differences may be due to differences in the way emotions are managed, rather than to general emotion regulation abilities. For example, in a study conducted by Zimmerman and Iwanski (2014) with a large sample ranging in age from 11 to 50, they found that although men and

women did not differ in terms of adaptive emotion regulation and emotion dysregulation, there were significant gender differences in many emotion regulation strategies. For example, they reported that women used more social and emotion-focused regulation strategies, while men tended to use more emotion-concealing and emotion-avoidance strategies. Similarly, numerous studies have reported that women tend to ruminate more about their emotions in order to cope with stressful experiences (Johnson & Whisman, 2013). These findings appear to be consistent with gender role theories, which suggest that emotional experience and expression, as well as reflection on emotions, are more common in women, whereas men tend to suppress or withdraw from emotional experience or expression (Nolen-Hoeksema, 2012). However, studies with children and adolescents suggest that these gender differences are not innate, at least for rumination (Rood et al., 2009). Rather, previous findings have shown that gender differences in rumination begin to be observed in early adolescence, around the age of 12 (Jose & Brown, 2008). On this basis, pre-adolescence, early adolescence, and middle adolescence seem to be good candidates for researchers to investigate possible gender differences in emotion regulation strategies and the stability of these differences. However, most previous studies in this area have not considered the developmental phases of adolescence and focused mainly on adolescents between the ages of 12-18 as a whole (Rood et al., 2009).

Interestingly, it appears that two opposite views in the literature attempt to explain gender differences in emotion regulation strategies based on same empirical finding, indicating women experience and react to emotions more intensely than men (Staugaard & Berntsen, 2021). Similar to what was found in adults, empirical evidence has suggested a comparable tendency in adolescents. For example, Chaplin and Aldao (2013) showed in their meta-analytic review that expressions of positive, internalizing (e.g., sadness) and externalizing (e.g., anger) emotions were more common in adolescent girls than boys. On the basis of this gender-specific emotional experience, the first view argued that because women have to regulate more intense emotions than men, it might be expected that women manage their emotions ineffectively and thus use maladaptive cognitive strategies more (Webb et al., 2012). On the contrary, the second view argued that women might use generally more emotion regulation strategies, as an advantage of having more practice on emotions (Nolen-Hoeksema, 2012). In this respect, studies have shown mixed results for cognitive emotion regulation strategies in adolescence. In overall, there are findings supporting both views.

On the one hand, several studies in middle and high school samples have reported that in addition to rumination (e.g., Hilt et al., 2010; Öngen, 2010), other maladaptive strategies such as self-blame (e.g., Duarte et al., 2015; Zagaria et al., 2023) and catastrophizing (e.g., Mumtaz

et al., 2017) were used more by adolescent girls. In contrast, some of these studies found that male adolescents were more likely to use adaptive cognitive strategies such as positive reappraisal and/or refocusing (e.g., Öngen, 2010; Mumtaz et al., 2017). However, other studies showed that adolescent girls use more cognitive strategies, regardless they are adaptive or not (e.g., te Brinke et al., 2021; Garnefski et al., 2018). Taken together, the results in the literature provide mixed findings on the questions of whether there is a gender difference in terms of cognitive emotion regulation strategies and if so, in what direction. Given the few and inconsistent findings in the literature, further research is needed in this respect. Therefore, the current study examined gender differences in cognitive emotion regulation across developmental phases of adolescence.

#### **2.1. 4.2.2. The Link between Emotion Regulation Strategies and Problem Behaviors**

Extensive research has shown that there are gender differences in various psychopathologies (Nolen Hoeksema, 2012). Specifically, gender-biased prevalence rates have been consistently reported for early onset externalizing and internalizing problems. Namely, boys have found to be at greater risk for developing externalizing problems in childhood such as oppositional defiant disorder and conduct disorder, whereas girls have found to be at greater risk for internalizing problems in adolescence such as depression and anxiety (Martel, 2013). Empirical evidence suggests that various biological, cognitive, social-emotional and environmental factors such as socialization practices play crucial role in explaining these gender differences in emotional problems (Zahn-Waxler et al., 2008). Given the importance of these factors also in emotion regulation, there appear to be common developmental links for gender differences in emotion regulation strategies and psychopathology (Cicchetti & Toth, 1998). For example, Jose and Brown (2008) revealed that female-biased differences in rumination emerged around the age of 12, approximately one year earlier than gender differences in depression. On this basis, it is quite plausible to expect gender-specific pathways between cognitive emotion regulation and emotional problems. That is, while a particular emotion regulation strategy may emerge as a risk factor or protective for one gender, a similar link may not be significant for the other gender (Nolen-Hoeksema, 2012).

In this sense, a promising number of studies including gender as a moderator have demonstrated differential associations between cognitive emotion regulation strategies and problem behaviors during adolescence (e.g., Perchtold et al., 2019; Rey Peña & Extremera Pacheco, 2012; Sontag & Graber, 2010). For example, with respect to maladaptive strategies, some researchers have found that rumination predicted depression over time only in girls (Burwell & Shirk, 2007; Krause et al., 2018; Schwartz & Koenig, 1996).

On the contrary, rumination and self-blame was found to be associated with externalizing problems only in boys (Rey Peña & Extremera Pacheco, 2012). In terms of adaptive strategies, Perchtold and colleagues (2019) have shown that reappraisal capacity was a protective factor for depression only in boys. However, in contrast, Duarte and colleagues (2015) reported that girls benefited more from positive reappraisal than boys in relation to depressive symptoms. Therefore, there are mixed findings regarding the effectiveness of adaptive strategies that differ depending on gender. Besides, although these results may imply that maladaptive strategies may be especially a risk for internalizing problems in women and externalizing problems in men, there are too few studies in the literature to draw a general conclusion on this issue. Moreover, to the best of our knowledge, it is unknown whether the gender-specific pathways in relation to internalizing and externalizing problems vary across the developmental phases of adolescence (Compas et al., 2017). Therefore, in order to fill this gap in the literature, the current study examined whether the relationship between cognitive emotion regulation strategies and problem behaviors differ by gender at different phases of adolescence.

#### **2.1. 5. The Aims of the Study 1**

In summary, evidence from the literature suggests that adolescence is a critical period in the life span in terms of emotion regulation development. Along with cognitive changes, youngsters begin to use a variety of cognitive strategies to cope with stressful experiences and to manage their emotions during adolescence. However, adolescence is seen as a dynamic developmental period with continuous and rapid changes in several biological, cognitive, social and psychological areas (Hollenstein & Loughheed, 2013). Previous research suggests that substantial individual differences in terms of cognitive emotion regulation begin to be observed during adolescence and these differences predict psychological functioning of adolescents (Jose & Brown, 2008; Nolen Hoeksema, 2012). In this sense, a growing number of studies have reported developmental phase (pre, early and mid- adolescence) and gender-related differences in the use of cognitive strategies to regulate emotions. Accordingly, it is suggested that cognitive maturation as well as emotional and social processes in adolescence may affect adolescents' habits of using cognitive emotion regulation in different ways (McRae et al., 2012). This means that some of the cognitive strategies may be used to a greater or lesser extent during certain periods of life. In addition, the emergence of gendered use of emotion regulation strategies during adolescence, along with differences in experienced emotional processes, has been highlighted in the literature (Zimmermann & Iwanski, 2014). Although there are studies in the literature that have addressed these issues, previous studies have predominantly focused on specific emotion regulation strategies (e.g., reappraisal and rumination) and also mainly ignored within-adolescence differences. Therefore, first aim of



the Study 1 is to investigate whether cognitive emotion regulation strategies differ by developmental phase (pre-, early- and mid-adolescence) and gender in adolescence.

Furthermore, it is widely acknowledged that the way in which individuals manage their emotions is closely linked to their psychological functioning. In fact, numerous studies have already established significant relationship between cognitive emotion regulation strategies and problem behaviors (Compas et al., 2017). Accordingly, based mostly on the adult literature, cognitive emotion regulation strategies that are associated with poorer psychological functioning are classified as maladaptive (e.g., self-blame, rumination and catastrophizing), whereas strategies generally considered to predict fewer psychological problems are classified as adaptive (e.g., positive reappraisal and refocusing). However, previous findings on cognitive emotion regulation strategies in relation to problem behaviors appears to be mixed in adolescent samples. Specifically, the cognitive strategies that are putatively accepted as adaptive in the literature did not consistently predict psychological functioning of adolescents (Kraft et al., 2023; Zhuang et al., 2020). Therefore, more research is needed to validate adaptiveness of cognitive emotion regulation strategies in adolescent samples. In addition, the adolescence years are highlighted in terms of maladaptive shifts in the use of emotion regulation strategies (Cracco et al., 2017) and emergence of gender differences in some regulation strategies (Jose & Brown, 2008). In a similar line, adolescence is considered to be a sensitive period due to the increased risk for internalizing and externalizing problems (Powers & Casey, 2015) and the emergence of gender differences especially in internalizing problems (Zahn-Waxler et al., 2008). Therefore, examining the link between emotion regulation strategies and problem behaviors at different developmental phases of adolescence and across genders is thought to contribute to a better understanding of this relationship and to identify the risk groups. Related to this, some researchers argue that there may be different pathways between cognitive emotion regulation and problem behaviors across developmental phases of adolescence and gender (Compas et al., 2017; Nolen-Hoeksema, 2012). For example, adolescents at certain developmental phases may benefit more from a particular strategy. Similarly, a particular strategy may be associated with fewer problematic symptoms for one gender, whereas it may be neutral for the other. Thus far, most research in adolescence has focused on the link between cognitive emotion regulation strategies and problem behaviors to identify common risk and protective factors in relation to psychological functioning. Surprisingly, to the best of the knowledge, the role of adolescent developmental phase and gender in linking cognitive emotion regulation strategies and problem behaviors has not been previously examined.

Therefore, second aim of the Study 1 is to examine predictor role of cognitive strategies in internalizing and externalizing problems across different phases of adolescence (i.e., pre-, early and mid-adolescence) and between genders.

Taken together, in order to fill the above research gaps, Study 1 aimed to answer twofold questions: 1) Does the use of cognitive emotion regulation strategies in adolescence differ by gender and developmental phase? 2) Does the relationship between cognitive strategies used to regulate emotions and problem behaviors in adolescence vary according to developmental phase and gender? To this end, the use of five cognitive emotion regulation strategies (i.e., self-blame, rumination, catastrophizing, positive reappraisal and positive refocusing) in response to negative experiences was examined at three levels of schooling (primary, secondary and high school) and across gender. In this respect, as they overlap with the age ranges usually reported in the literature (Chiasson et al., 2017), the primary (3<sup>th</sup> and 4<sup>th</sup> grades), secondary (5<sup>th</sup> to 8<sup>th</sup> grades) and high school (9<sup>th</sup> to 11<sup>th</sup> grades) samples were assumed to correspond to pre-adolescence, early adolescence and mid-adolescence, respectively. Next, the cognitive strategies were examined in relation to adolescents' psychological functioning, namely internalizing and externalizing problems. In order to test differential pathways for both gender and developmental phases, gender was added as a moderating variable in analyses conducted on the basis of school level. Given the existing findings in the literature on cognitive emotion regulation, the hypotheses of the current study were as follows.

- 1) *Regarding the use of cognitive emotion regulation strategies,*
  - a) It was expected that the cognitive emotion regulation strategies would be used more often by the older adolescents. Therefore, there would be a significant increase in the use of regulation strategies from primary school through to high school.
  - b) It was expected that there would be gender differences in certain emotion regulation strategies. Accordingly, maladaptive cognitive strategies (i.e., rumination, self-blame and catastrophizing) would be used more often by adolescent girls. However, due to equivocal findings in the literature, no a priori prediction was made regarding the use of adaptive strategies (i.e., positive reappraisal and positive refocusing).
  - c) It was expected that there would be dynamic interplay between gender and developmental phase regarding the use of cognitive strategies.

Consistent with previous research suggesting that gender differences begin to emerge in early adolescence, the proposed gender differences would be observed among adolescents in secondary and high school.

- 2) *Regarding the link between cognitive emotion regulation strategies and problem behaviors,*
  - a) It was expected that putatively adaptive strategies such as positive reappraisal and refocusing negatively but maladaptive strategies such as self-blame, rumination and catastrophizing would positively predict internalizing and externalizing problems.
  - b) It was expected that the effectiveness of using cognitive strategies to regulate emotions would be greater for older adolescents. Accordingly, it was expected significant and stronger associations between cognitive emotion regulation strategies and problem behaviors for older age groups.
  - c) It was expected that gender would moderate the relationship between cognitive strategies and problem behaviors in adolescence. On this question, however, there are insufficient and inconsistent findings in the literature. Therefore, no specific hypothesis has been generated in this regard and the moderating role of gender has been tested on an exploratory basis.

## **2.2. Method**

### **2.2.1. Participants**

The sample of this study were a part of nationally representative project that designed to investigate the role of several environmental and familial factors on the development of children and adolescents aged 6-17 in Türkiye. In the scope of the project, the participants were recruited through the schools that the Turkish Statistical Institute selected randomly from different regions of Türkiye. Students whose biological mother was not alive or did not live with their biological mother, or mothers who did not have Turkish proficiency to understand the questionnaires, students with diagnosed mental disabilities or students with special educational needs were excluded from the study. A total of 6216 school-age children (from 1<sup>st</sup> to 11<sup>th</sup> grade) and 5996 mothers were taken part in the project. However, since cognitive emotion regulation skills were measured in students over a certain age group, the sample in the current study was limited to those between the 3<sup>rd</sup> and 11<sup>th</sup> grade levels and their mothers

participating in the project. A total of 5041 children and adolescents from primary ( $n = 1130$ ), secondary ( $n = 2199$ ), and high school ( $n = 1712$ ) levels were included in the current study. Students' age ranged between eight and nineteen ( $M = 12.52$ ,  $SD = 2.59$ ), and 53.5 % of them were female. The more detailed information regarding sample demographics were stated in Table 1.

Table 1. Demographic Characteristics of the Sample in Study 1

<i>Demographic Variables</i>	<i>N</i>	<i>Percent / Range</i>	<i>Mean</i>	<i>SD</i>
<b>School Level</b>				
Primary	1130	22.4%		
Secondary	2199	43.6%		
High School	1712	34.0%		
<b>Grade Level</b>				
Grade 3	562	11.1%		
Grade 4	568	11.3%		
Grade 5	585	11.6%		
Grade 6	557	11.0%		
Grade 7	551	10.9%		
Grade 8	506	10.0%		
Grade 9	601	11.9%		
Grade 10	580	11.5%		
Grade 11	531	10.5%		
Students' Age	5041	8-18	12.52	2.59
<b>Students' Gender</b>				
Girls	2696	53.5%		
Boys	2345	46.5%		
Mothers' Age	4409	22-62	39.16	5.61
<b>Mothers' Education Level (completed degree)</b>				
Illiterate	133	2.6%		
Literate	154	3.1%		
Primary School	1274	25.3%		
Secondary School	751	14.9%		
High School	1311	26.0%		
College	807	16.0%		
Post graduate	77	1.5%		
<b>Mothers' Marital Status</b>				
Married to father of participated child	4188	83.1%		
Divorced	200	4.0%		
Widow	63	1.2%		
Remarried	56	1.1%		
Student Perceived SES	3911	1-10	5.90	1.91
Mother Perceived SES	4479	1-10	4.21	1.93

*Note.* Perceived SES was not asked to students in primary school level

### **2.2.2.1. The Cognitive Emotion Regulation Questionnaire (CERQ, Garnefski et al., 2001, 2007).**

The preadolescents and adolescents' cognitive emotion regulation strategies were evaluated by CERQ. The scale was originally developed for individuals over the age of 12 (Garnefski et al., 2001), and then adapted for children aged 9-11 by changing and simplifying some of the statements (Garnefski et al., 2007). In order to make a developmental comparison between different age groups in the sample, two separate forms of the scale were combined into a single form that can be applied to all age groups. To this end, the statements in the adult and child forms were first compared in terms of comprehensibility and suitability for the age group of the sample. As a result, except for item 7, 8, and 12 the items were taken from child version. However, Item 7 (i.e., "I think that I have been stupid) and item 12 ("I think that it's my own fault") in the child form were changed with corresponding items in the adult form (i.e., "I feel that I am the one who is responsible for what has happened" and "I think about the mistakes I have made in this matter", respectively), considering that they would better represent all age groups. Also, due to similar reason, item 8 in the child ("i.e., I think that it makes me feel 'older and wiser'") and adult forms (i.e., "I think that I can become a stronger person as a result of what has happened) were combined in a single item (i.e., "I think it can make me grow and make me a stronger person"). The items in the child form were translated into Turkish using a translation and back translation procedure, while the items in the adult form were taken from Tuna and Bozo (2012). The participants were asked to rate the frequency of their use of specific strategy after a stressful or threatening event on a 5-point Likert type scale (1 = never; 5 = always). In original, the scale consists of nine thought-based strategies, each containing 4 items, that individuals use to regulate their emotions. However, in the scope of the current project, only five subscales which found related with psychopathology in adolescent sample were included (Garnefski et al., 2005; Garnefski & Kraaij, 2006). These subscales were self-blame, rumination, catastrophizing, positive refocusing, and positive reappraisal.

*Self-blame* refers to the thoughts that the person sees her/himself as responsible for the negative event s/he experienced (e.g. "I feel that I am the one to blame for it"). *Rumination* refers to repetitively dwelling on one's feelings and thoughts related to negative events that experienced (e.g. "I often think about how I feel about what I have experienced"). *Catastrophizing* refers to one's focusing on the negativity of the negative event that experienced (e.g., I keep thinking about how terrible it is what I have experienced). *Positive refocusing* refers to distracting one's attention from negative event by focusing on pleasant or other things (i.e., I think of nicer things than what I have experienced).

Lastly, *Positive reappraisal* refers to attributing a positive meaning to the negative event, such as seeing it as an important experience for personal growth (i.e., I think I can learn something from the situation).

For the analysis, the mean composite scores were created for each strategy and higher scores indicated the more use of specific cognitive strategy. In the current study, the Cronbach alpha values were found to be in acceptable ranges for *self-blame* ( $\alpha = .78$ ), *rumination* ( $\alpha = .80$ ), *catastrophizing* ( $\alpha = .73$ ), *positive refocusing* ( $\alpha = .81$ ), and *positive reappraisal* ( $\alpha = .69$ ).

#### **2.2.2.2. Child Behavior Checklist (CBCL, Achenbach & Rescorla, 2001).**

Internalizing and externalizing problems of children and adolescents were measured with the Turkish version of revised Child Behavior Checklist (Dümenci et al., 2004). For internalizing dimension, the scale consists of three subscales, including *anxiety/depression* (13-item), *social withdrawal/depression* (8-item), and *somatic complaints* (5-item), and it includes two subscales which are *rule breaking* (15-item) and *aggressive behaviors* (18-items) for externalizing dimension. The mothers rated their children's behaviors observed in the last six months from 0 ("not true") to 2 ("very true or often true"). The mean composite scores were created for each subscale and both dimensions in which higher scores indicates more problematic behaviors for specific dimension. For internalizing problems, Cronbach's alpha values were .75, .80, .80, and .91 for social withdrawal/depression, anxiety/depression, somatic complaints, and total scale, respectively. For externalizing problems, Cronbach's alpha values were .81, .86, and .89 for rule breaking problems, aggressive behaviors, and total externalizing problems, respectively.

#### **2.2.3. Procedure**

The current study was conducted as a part of nationally representative longitudinal research called "Turkish Family, Child & Adolescent Project", which was funded by The Scientific and Technological Research Council of Türkiye (TUBITAK). The ethical approval and necessary permissions of the project were received from the Human Subjects Ethics Committee of the Middle East Technical University (see Appendix A), the Ministry of National Education in Türkiye (see Appendix B), and administration of schools where the data were collected. As aforementioned, the schools were determined by The Turkish Statistical Institute (TÜİK) to reach a representative sample in Türkiye. Before the data collection, within the scope of the project, it was aimed to reach 10 mother and child couples from each grade level in each school selected. In order to achieve this, two classes from each grade level were randomly selected, and mothers in selected classes were invited to the project via parents' groups (e.g. through

school or class WhatsApp Groups) In case the targeted number of mother-child pairs could not be reached, a new class was randomly selected, and the target number was tried to be completed.

The written informed consents were obtained online from mothers, and then the mothers were called over the phone and verbally informed about the project and data collection process in more detail. The data were collected via Qualtrics. Mothers who were literate and had an internet connection at home filled out the questionnaires on their phones, whereas those who were illiterate or did not have internet access completed the questionnaires on the tablets at their children's schools. After data collection process was completed for the mothers, data from children were collected at schools. Children attended to data collection sessions in groups of about 10 students and filled out the questionnaires on tablets during school time. At the end, all participants were given small gifts (such as scarfs for mothers, and pen/pencil case/marker for children) for their participation.

### **2.3. Results**

First, the results of preliminary analyses including the screening of the data will be presented. Next, descriptive and correlational statistics between study variables will be reported for the total sample and separately for each school level. In relation to first objective of the study, the results of the factorial MANOVA, comparing gender and level of schooling on cognitive emotion regulation strategies, will then be presented. Finally, in relation to second objective of the study, the results of hierarchical multiple regression analyses that examined the associations between cognitive strategies and psychopathology will be provided for each school level.

#### **2.3.1. Preliminary Analyses**

The statistical analyses were performed using IBM SPSS Statistics version 28.0.0.0. Firstly, the descriptive analysis for study variables were run for total sample ( $N = 5041$ ), and then separately for both gender on the basis of school level.

The first aim of the study 1 was to examine whether the use of cognitive emotion regulation strategies in adolescence differs by gender and developmental phase. To this end, a factorial ( $3 \times 2$ ) multivariate analysis of variance (MANOVA) was utilized to investigate school level (*primary, secondary & high school*) and gender differences in respect to cognitive strategies (*self-blame, rumination, catastrophizing, positive refocusing and positive reappraisal*). Before the analysis, the dataset was examined for assumption of multivariate analysis as suggested by Tabachnick and Fidell (2007).

Since the child-reported data did not include missing scores for any measures, missing value imputation was not needed. In terms of multivariate normality, the sample size of 5041 consists of more than 500 cases for each cell of multivariate ANOVA. This means that there are more than 20 degrees of freedom for error even in the smallest cell. Therefore, it was assumed that multivariate normality was achieved. Also, all dependent variables in each cell were normally distributed, and this was accepted as satisfactory for linearity. Although there were no univariate outliers within-cells based on criterion of  $z$ -score  $> |3.29|$ , according to Mahalanobis Distances, 11 cases in six cells (3 x 2 design) were yielded as multivariate outliers in total. These cases were deleted from the dataset, and a total number of participants were decreased to 5030 for MANOVA analysis. Then, correlation matrix among dependent variables were examined for assumption of multicollinearity. The results showed that the highest correlation ( $r = .63$ ) was not exceed  $.90$ , Therefore, multicollinearity was not seen as a problem for this model. Finally, in terms of homogeneity of variances and covariances matrix, Box's M value of 540.11 was significant ( $p < .001$ ). Hence, since Pillai's test is a robust test when Box's M value was significant, and sample sizes within cells are unequal, it was reported for multivariate results (Tabachnick & Fidell, 2007, p. 254).

The second aim of the study 1 was to examine whether the link between cognitive emotion regulation and adolescents' psychological functioning varied according to developmental phase and gender. To this end, hierarchical regression analyses were conducted on the basis of school level, and gender was added as a moderating variable in the model. Before the analyses, the assumptions of multiple regression were separately checked for three mother-child paired school level datasets by following instructions of Tabachnick and Fidell (2007). Results of evaluation of univariate outliers, normality, and multicollinearity for independent variables and linearity of the model were satisfactory. However, skewness and kurtosis values of externalizing problems in all datasets seemed to exceed the limits ( $> |2|$ , George & Mallery, 2010). Also, the results yielded some outlier cases ( $> |3.30|$  of  $z$ -score) for internalizing and externalizing problems (i.e., max. 24 cases for externalizing and 13 cases for internalizing in secondary school level). Nevertheless, since these variables, which are psychopathology markers, were not normally distributed due to their nature and the sample was large enough, no transformation was performed on externalizing and internalizing variables. Next, multivariate outliers were checked using Mahalanobis distances at  $p < .001$ . A total of six cases (3, 1, and 2 cases from primary, secondary, and high school, respectively) were identified as multivariate outliers, and these cases were deleted from the datasets. For the analyses, all predictors were centered at the group-mean level and then interaction terms with gender were generated. Finally, for primary, secondary and high school levels, the 3-step regression



analyses were carried out with 1017, 1879 and 1347 samples for internalizing, and 1022, 1875, and 1346 samples for externalizing problems, respectively.

### **2.3.2. Correlational Statistics**

The correlation values between the study variables are reported below for the entire sample and separately for male and female students at primary, secondary and high school levels, respectively. In order to make easier for readers to follow, the correlations between cognitive emotion regulation strategies and psychopathology were explained for total internalizing and externalizing problems. However, the correlations with subscales of internalizing and externalizing problems were presented only in tables. In sum, correlation results for entire sample and each school level were given in Table 2, Table 3, Table 4, and Table 5, respectively.

#### **2.3.2.1. Correlations of Study Variables for Total Sample**

The correlation results including entire sample (i.e., regardless of school level) showed that all cognitive emotion regulation strategies were positively associated with each other ( $r_{range} = .10-.63$ ). In terms of gender differences in emotion regulation, it was found that rumination ( $r = -.13$ ), self-blame ( $r = -.05$ ), and catastrophizing ( $r = -.10$ ) strategies were used more frequently by girls than boys, whereas the positive refocusing strategy ( $r = .06$ ) was used more frequently by boys than girls. However, positive reappraisal was not significantly correlated with gender. Furthermore, age was significantly negatively correlated with positive refocusing ( $r = -.14$ ), whereas it was positively correlated with other cognitive strategies ( $r_{range} = .09-.19$ )

Regarding the correlations between maladaptive emotion regulation strategies and psychopathology of adolescents, the results showed that self-blame and catastrophizing ( $r_{range} = .08-.15$ ) were positively related to internalizing ( $r = .13$ ;  $r = .15$ , respectively) and externalizing ( $r = .07$ ,  $r = .08$ , respectively) problems. However, rumination was found to be positively correlated with internalizing problems ( $r = .08$ ) but not with externalizing problems. On the other hand, when the correlations between adaptive strategies and psychopathology were examined, it was found that positive refocusing and reappraisal were negatively related to internalizing ( $r = -.13$ ;  $r = -.06$ , respectively) and externalizing problems ( $r = -.07$ ;  $r = -.04$ , respectively). In detail, the results for descriptive and correlational statistics were summarized in the Table 2.

#### **2.3.2.2. Correlations of Study Variables for Each School Level and Gender**

Given the correlations for *girls* at the *primary school* level, all emotion regulation strategies were positively correlated ( $r_{range} = .21-.66$ ). Surprisingly, rumination was strongly and positively correlated with the adaptive strategies including positive refocusing ( $r = .44$ ) and

reappraisal ( $r = .56$ ) strategies. Regarding the associations between cognitive emotion regulation strategies and psychopathology, positive refocusing ( $r = -.14$ ), positive reappraisal ( $r = -.16$ ), and rumination ( $r = -.11$ ) strategies were negatively correlated with internalizing problems, whereas self-blame and catastrophizing were not significantly correlated with internalizing problems. Furthermore, none of the emotion regulation strategies examined were found to be related to externalizing problems in girls at this school level. On the other hand, given the correlations for **boys** at the **primary school level**, all cognitive strategies were positively correlated similar to the findings for girls ( $r_{\text{range}} = .29-.65$ ). Also, rumination was highly correlated with positive refocusing ( $r = .54$ ) and reappraisal ( $r = .65$ ) strategies. In contrast to girls, positive refocusing, positive reappraisal and rumination were not significantly associated with either internalizing or externalizing problems among boys. However, self-blame and catastrophizing were positively correlated with externalizing problems ( $r = .11$ ;  $r = .13$ , respectively). In addition, catastrophizing was positively correlated with internalizing problems ( $r = .09$ ) (see Table 3).

Regarding the correlations for **girls** at the **secondary school level**, the cognitive emotion regulation strategies, with the exception of positive refocusing, were positively correlated with each other ( $r_{\text{range}} = .10-.58$ ). On the other hand, positive refocusing was significantly related to only positive reappraisal ( $r = .61$ ) and rumination ( $r = .25$ ) strategies. Furthermore, although the magnitude of the associations tended to decrease compared to those at the primary school level, rumination was still highly correlated with adaptive strategies such as positive reappraisal ( $r = .46$ ) and refocusing ( $r = .25$ ) strategies. Further, positive refocusing and reappraisal were negatively associated with internalizing ( $r = -.15$ ;  $r = -.11$ , respectively) and externalizing ( $r = -.13$ ;  $r = -.08$ , respectively) problems. On the other hand, self-blame and catastrophizing were positively correlated with internalizing ( $r = .11$ ;  $r = .15$ , respectively) and externalizing ( $r = .10$ ;  $r = .10$ , respectively) problems. However, rumination strategy was not associated with either internalizing or externalizing problems among girls in secondary school. Regarding the correlations for **boys** at the **secondary school level**, all cognitive strategies were found to be positively correlated ( $r_{\text{range}} = .28-.70$ ). With respect to psychopathology, rumination and catastrophizing were found to be associated with only internalizing problems ( $r = .08$ ;  $r = .12$ , respectively). However, positive reappraisal, positive refocusing and self-blame were not significantly correlated with either internalizing or externalizing problems (see Table 4).

Table 2. Descriptive and Correlational Statistics for Total Sample in Study 1

	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Gender	—												
2. Age	-.04*	—											
3. Self-Blame	-.05**	.14**	—										
4. Rumination	-.13**	.19**	.57**	—									
5. Catastrophizing	-.10**	.09**	.58**	.63**	—								
6. Refocusing	.06**	-.14**	.12**	.28**	.10**	—							
7. Reappraisal	.01	.12**	.31**	.51**	.25**	.57**	—						
8. Depression <sup>a</sup>	-.08**	.22**	.10**	.06**	.11**	-.14**	-.06**	—					
9. Anxiety <sup>b</sup>	-.17**	.06**	.12**	.08**	.15**	-.09**	-.06**	.64**	—				
10. Somatic Comp.	-.13**	.18**	.10**	.08**	.11**	-.10**	-.03	.52**	.60**	—			
11. Internalizing T	-.15**	.17**	.13**	.08**	.15**	-.13**	-.06**	.83**	.90**	.81**	—		
12. Aggression	-.01	.00	.08**	.03	.10**	-.07**	-.05*	.36**	.53**	.41**	.52**	—	
13. Rule Breaking	.10**	.06**	.02	-.02	.02	-.05*	-.01	.25**	.28**	.28**	.32**	.55*	—

Note. \* $p < .01$ ; \*\*  $p < .001$ ; <sup>a</sup> Depression/Social withdrawal subscale; <sup>b</sup> Anxiety/depression subscale;  $N = 5030$ ; Girls were coded as “0”; whereas boys were coded as “1”.

Table 2 (cont'd). Descriptive and Correlational Statistics for Total Sample in Study 1

	1	2	3	4	5	6	7	8	9	10	11	12	13
14. Ext. Prob <sup>c</sup>	.02	.02	.07**	.02	.08**	-.07**	-.04*	.36**	.51**	.42**	.51**	.97**	.74**
Mean	.46	12.52	2.88	3.32	2.91	3.15	3.10	.50	.46	.26	.40	.30	.06
SD	.50	2.59	.97	1.00	.98	1.05	.91	.40	.33	.29	.28	.26	.12
Min-Max	0-1	8-18	1-5	1-5	1-5	1-5	1-5	0-2	0-1.85	0-1.91	0-1.69	0-1.89	0-2

Note. \* $p < .01$ ; \*\*  $p < .001$ ; <sup>a</sup> Depression/Social withdrawal subscale; <sup>b</sup> Anxiety/depression subscale;  $N = 5030$ ; Girls were coded as "0"; whereas boys were coded as "1". <sup>c</sup>Ext. Prob = externalizing problems

Regarding the correlations for *girls* at the *high school* level, positive refocusing was positively associated with positive reappraisal ( $r = .61$ ) but negatively associated with self-blame ( $r = -.11$ ) and catastrophizing ( $r = -.16$ ). Moreover, positive reappraisal was positively correlated with rumination ( $r = .34$ ) and self-blame ( $r = .07$ ). Apart from these, all maladaptive strategies (i.e., self-blame, rumination and catastrophizing) were positively correlated ( $r_{\text{range}} = .50-.53$ ). Furthermore, positive refocusing was negatively correlated with internalizing ( $r = -.17$ ) and externalizing ( $r = -.09$ ) problems. However, positive reappraisal was negatively correlated with only internalizing ( $r = -.12$ ) but not externalizing problems. On the other hand, self-blame and catastrophizing were positively correlated with both internalizing ( $r = .21$ ;  $r = .19$ , respectively) and externalizing ( $r = .14$ ;  $r = .18$ , respectively) problems. However, rumination was found positively related to only externalizing problems ( $r = .09$ ) among girls at high school. Regarding the correlations for *boys* at the *high school* level, all cognitive emotion regulation strategies were positively correlated ( $r_{\text{range}} = .21-.64$ ). With respect to psychopathology, only catastrophizing was positively associated with internalizing problem ( $r = .11$ ). However, none of the cognitive strategies examined was found related to externalizing problems for boys in high school (see Table 5).

### **2.3.3. The Results for Testing School Level and Gender Differences in Cognitive Emotion Regulation.**

In order to test the first set of hypotheses including 1a, 1b and 1c, the multivariate ANOVA (3x2) was performed to examine school level and gender differences in the five cognitive emotion regulation strategies. Univariate F-tests and Bonferroni post-hoc comparisons where appropriate were conducted to examine these differences for each cognitive strategy. The results of these analyses were reported below respectively. The statistics of main and interaction effects were presented in Table 6, and also descriptive statistics and post-hoc comparisons were summarized in Table 7.

#### **2.3.3.1. School-Level Differences in Cognitive Emotion Regulation Strategies**

The results showed that there was a significant *school level* difference on the combination of five cognitive emotion regulation strategies, Pillai's Trace = .10,  $F(10, 10042) = 50.51$ ,  $p < .001$ ,  $\eta_p^2 = .05$ . According to the results of univariate F-tests, the use of cognitive strategies significantly differed by level of schooling in terms of *self-blame* [ $F(2,5024) = 44.50$ ,  $p < .001$ ,  $\eta_p^2 = .02$ ], *rumination* [ $F(2,5024) = 80.41$ ,  $p < .001$ ,  $\eta_p^2 = .03$ ], *catastrophizing* [ $F(2,5024) = 32.23$ ,  $p < .001$ ,  $\eta_p^2 = .01$ ], *positive refocusing* [ $F(2,5024) = 55.91$ ,  $p < .001$ ,  $\eta_p^2 = .02$ ] and *positive reappraisal* [ $F(2,5024) = 44.50$ ,  $p < .001$ ,  $\eta_p^2 = .02$ ].

Table 3. Correlational Statistics for Primary School Level in Study 1

	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>
1.Positive Refocusing	—	.55**	.21**	.44**	.23**	-.13*	-.11*	-.10*	-.14*	-.05	-.04	-.05
2.Positive Reappraisal	.60**	—	.44**	.56**	.41**	-.12*	-.14*	-.13*	-.16**	-.06	.01	-.05
3.Self-Blame	.35**	.48**	—	.58**	.63**	-.04	-.02	-.02	-.02	.05	-.04	.03
4.Rumination	.54**	.65**	.62**	—	.66**	-.10*	-.08	-.11*	-.11*	-.01	-.04	-.02
5.Catastrophizing	.29**	.48**	.56**	.59**	—	-.05	.00	-.03	-.03	.03	-.07	.00
6.Depression <sup>a</sup>	.00	.01	.01	.01	.04	—	.63**	.47**	.81**	.34**	.27**	.36**
7.Anxiety <sup>b</sup>	.01	.00	.09*	.08	.12*	.62**	—	.59**	.91**	.53**	.29**	.52**
8.Somatic Problems	-.01	.00	.05	.04	.06	.43**	.50**	—	.80**	.43**	.33**	.45**
9.Internalizing Total	.01	.01	.07	.06	.09*	.81**	.90**	.75**	—	.53**	.35**	.53**
10.Agression	-.00	-.02	.10*	.07	.12*	.31**	.50**	.34**	.48**	—	.51**	.97**
11.Rule Breaking	-.03	.04	.11*	.07	.10*	.23**	.34**	.21**	.33**	.59**	—	.71**
12.Externalizing Total	-.01	-.00	.11*	.08	.13*	.32**	.50**	.34**	.48**	.98**	.75**	—

*Note.* The correlation coefficients below the diagonal are for boys; the correlation coefficients above the diagonal are for girls.

<sup>a</sup>Depression/Social withdrawal; <sup>b</sup> Anxiety/Depression subscale; \* $p < .05$ ; \*\*  $p < .001$

Table 4. Correlational Statistics for Secondary School Level in Study 1

	1	2	3	4	5	6	7	8	9	10	11	12
1.Positive Refocusing	—	.61**	.04	.25**	-.02	-.15**	-.13**	-.10*	-.15**	-.13**	-.07*	-.13**
2.Positive Reappraisal	.59**	—	.17**	.46**	.10**	-.13**	-.09*	-.05	-.11**	-.08*	-.04	-.08*
3.Self-Blame	.28**	.41**	—	.49**	.53**	.08*	.13**	.05	.11**	.10*	.05	.10*
4.Rumination	.44**	.57**	.62**	—	.58**	-.03	.05	.01	.02	-.02	-.02	-.02
5.Catastrophizing	.30**	.38**	.64**	.70**	—	.12**	.17**	.08*	.15**	.10*	.05	.10*
6.Depression <sup>a</sup>	-.06	-.08*	.03	.03	.08*	—	.67**	.51**	.84**	.43**	.29**	.44**
7.Anxiety <sup>b</sup>	.02	-.03	.06	.09*	.10*	.62**	—	.59**	.91**	.56**	.31**	.55**
8.Somatic Problems	-.00	-.02	.08*	.09*	.11*	.47**	.59**	—	.80**	.43**	.28**	.44**
9.Internalizing Total	-.01	-.05	.07	.08*	.12**	.82**	.91**	.80**	—	.56**	.34**	.56**
10.Agression	-.02	-.05	.03	.03	.07	.32**	.52**	.40**	.50**	—	.52**	.98**
11.Rule Breaking	-.05	-.04	.03	.00	.04	.27**	.32**	.30**	.36**	.61**	—	.69**
12.Externalizing Total	-.03	-.05	.04	.02	.06	.34**	.51**	.40**	.50**	.97**	.78**	—

*Note.* The correlation coefficients below the diagonal are for boys; the correlation coefficients above the diagonal are for girls.

<sup>a</sup>Depression/Social withdrawal; <sup>b</sup> Anxiety/Depression subscale; \* $p < .05$ ; \*\*  $p < .001$

Table 5. Correlational Statistics for High School Level in Study 1

	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>
1.Refocusing	—	.61**	-.11*	.05	-.16**	-.18**	-.15**	-.11**	-.17**	-.09*	-.05	-.09*
2.Reappraisal	.57**	—	.07*	.34**	-.05	-.15**	-.11*	-.05	-.12**	-.02	.01	-.01
3.Self-Blame	.21**	.40**	—	.50**	.53**	.17**	.20**	.16**	.21**	.17**	-.01	.14**
4.Rumination	.31**	.51**	.57**	—	.52**	.04	.07	.07	.07	.11*	.00	.09*
5.Catastrophizing	.23**	.26**	.55**	.64**	—	.13**	.20**	.15**	.19**	.21**	.02	.18**
6.Depression <sup>a</sup>	-.01	-.00	.06	.08	.11*	—	.67**	.54**	.84**	.39**	.21**	.38**
7.Anxiety <sup>b</sup>	.02	-.01	.07	.06	.10*	.60**	—	.62**	.90**	.56**	.29**	.55**
8.Somatic Problems	-.02	-.00	.06	.02	.07	.47**	.59**	—	.83**	.46**	.32**	.47**
9.Internalizing Total	-.01	-.00	.08	.06	.11*	.82**	.89**	.80**	—	.56**	.32**	.55**
10.Aggression	-.05	-.06	-.02	-.03	.04	.35**	.52**	.43*	.53**	—	.53**	.97**
11.Rule Breaking	-.03	-.08	-.04	-.10*	-.03	.24**	.34**	.38**	.38**	.61**	—	.72**
12.Externalizing Total	-.05	-.07	-.03	-.05	.02	.35**	.51**	.46**	.53**	.96**	.81**	—

*Note.* The correlation coefficients below the diagonal are for boys; the correlation coefficients above the diagonal are for girls. <sup>a</sup>Depression/Social withdrawal; <sup>b</sup> Anxiety/Depression subscale; \* $p < .05$ ; \*\*  $p < .001$



Table 6. MANOVA Results: Gender and School Level Differences on CERS

<i>Outcomes</i>	<i>df</i>	<i>F</i>	<i>p</i>	$\eta_p^2$	
<b>Self-Blame</b>	<i>Corrected model</i>	5	21.872	<.001	.021
	<i>Intercept</i>	1	41.099,252	<.001	.891
	<i>Gender</i>	1	9.376	.002	.002
	<i>School Level</i>	2	44.501	<.001	.017
	<i>Interaction</i>	2	2.266	.104	.001
<b>Rumination</b>	<i>Corrected model</i>	5	53.210	<.001	.050
	<i>Intercept</i>	1	53.308,126	<.001	.914
	<i>Gender</i>	1	69.982	<.001	.014
	<i>School Level</i>	2	80.407	<.001	.017
	<i>Interaction</i>	2	5.223	.005	.000
<b>Catastrophizing</b>	<i>Corrected model</i>	5	24.395	<.001	.024
	<i>Intercept</i>	1	41.340,050	<.001	.892
	<i>Gender</i>	1	44.099	<.001	.009
	<i>School Level</i>	2	32.230	<.001	.013
	<i>Interaction</i>	2	3.850	.021	.002
<b>Positive Refocus</b>	<i>Corrected model</i>	5	30.642	<.001	.030
	<i>Intercept</i>	1	43.460,075	<.001	.896
	<i>Gender</i>	1	8.525	.004	.002
	<i>School Level</i>	2	55.910	<.001	.022
	<i>Interaction</i>	2	9.601	<.001	.004
<b>Positive Reappraisal</b>	<i>Corrected model</i>	5	14.358	<.001	.014
	<i>Intercept</i>	1	53.930,287	<.001	.915
	<i>Gender</i>	1	0.595	.440	.000
	<i>School Level</i>	2	34.562	<.001	.014
	<i>Interaction</i>	2	7.080	.309	.000

*N* = 5024

The post-hoc comparisons revealed that the self-blame and rumination strategies increased with school level. In this respect, the results showed that adolescents in high school reported using more *self-blame* (for primary:  $M = 2.66$ ,  $SD = 0.99$ ; secondary:  $M = 2.89$ ,  $SD = 0.97$ ; and for high school:  $M = 3.02$ ,  $SD = 0.93$ ) and *rumination* (for primary:  $M = 3.04$ ,  $SD = 1.03$ ; secondary:  $M = 3.32$ ,  $SD = 1.00$ ; and for high school:  $M = 3.53$ ,  $SD = 0.92$ ) in negative situations compared to youngsters in secondary and primary school. In contrast, these strategies were used least frequently at the primary school level. Moreover, the results indicated that adolescents in secondary and high school scored significantly higher on *catastrophizing* (for primary:  $M = 2.70$ ,  $SD = 1.00$ ; secondary:  $M = 2.95$ ,  $SD = 0.98$ ; and for high school:  $M = 3.00$ ,  $SD = 0.93$ ) and *positive reappraisal* (for primary:  $M = 2.91$ ,  $SD = 0.95$ ; secondary:  $M = 3.14$ ,  $SD = 0.92$ ; and for high school:  $M = 3.18$ ,  $SD = 0.85$ ) strategies than pre-adolescents in primary school. However, there was no significant difference in this regard between the secondary and high school levels. Finally, the results showed that the positive

refocusing strategy was less likely to be used by adolescents in high school compared to other school levels (for primary:  $M = 3.30$ ,  $SD = 1.08$ ; secondary:  $M = 3.24$ ,  $SD = 1.05$ ; and for high school:  $M = 2.93$ ,  $SD = 0.98$ ). However, the scores on positive refocusing did not significantly differ between the primary and secondary school levels.

Table 7. Post Hoc Comparisons for School Level and Gender Differences on Cognitive Emotion Regulation Strategies

<i>Outcomes</i>	School Level				
		<i>Primary School</i>	<i>Secondary School</i>	<i>High School</i>	<i>Total</i>
		<i>M (SD)</i>	<i>M (SD)</i>	<i>M (SD)</i>	
<b>Self-Blame</b>	<i>Girls</i>	2.68 (1.00)	2.91 (0.98)	3.10 (0.96)	2.93 (0.99) <sub>X</sub>
	<i>Boys</i>	2.65 (0.99)	2.85 (0.95)	2.93 (0.88)	2.83 (0.94) <sub>Y</sub>
<b>Rumination</b>	<i>Girls</i>	3.11 (1.02) <sub>a</sub>	3.42 (0.98) <sub>b</sub>	3.69 (0.87) <sub>c</sub>	3.45 (0.97) <sub>X</sub>
	<i>Boys</i>	2.97 (1.04) <sub>a</sub>	3.21 (1.01) <sub>c</sub>	3.32 (0.95) <sub>d</sub>	3.19 (1.00) <sub>Y</sub>
	<i>Total</i>	3.04 (1.03) <sub>A</sub>	3.32 (1.00) <sub>B</sub>	3.53 (0.92) <sub>C</sub>	
<b>Catastrophizing</b>	<i>Girls</i>	2.80 (0.99) <sub>a</sub>	2.99 (0.99) <sub>b</sub>	3.12 (0.93) <sub>c</sub>	3.00 (0.97) <sub>X</sub>
	<i>Boys</i>	2.62 (1.01) <sub>d</sub>	2.89 (0.98) <sub>b</sub>	2.85 (0.91) <sub>b</sub>	2.80 (0.97) <sub>Y</sub>
	<i>Total</i>	2.70 (1.00) <sub>A</sub>	2.95 (0.98) <sub>B</sub>	3.00 (0.93) <sub>B</sub>	
<b>Positive Refocusing</b>	<i>Girls</i>	3.36 (1.07) <sub>a</sub>	3.17 (1.06) <sub>b</sub>	2.82 (1.01) <sub>c</sub>	3.09 (1.06) <sub>X</sub>
	<i>Boys</i>	3.25 (1.09) <sub>a</sub>	3.32 (1.04) <sub>a</sub>	3.06 (0.94) <sub>d</sub>	3.21 (1.03) <sub>Y</sub>
	<i>Total</i>	3.30 (1.08) <sub>A</sub>	3.24 (1.05) <sub>A</sub>	2.93 (0.98) <sub>B</sub>	
<b>Positive Reappraisal</b>	<i>Girls</i>	2.93 (0.96)	3.11 (0.91)	3.16 (0.86)	3.09 (0.91) <sub>X</sub>
	<i>Boys</i>	2.89 (0.95)	3.17 (0.93)	3.21 (0.84)	3.10 (0.91) <sub>X</sub>
	<i>Total</i>	2.91 (0.95) <sub>A</sub>	3.14 (0.92) <sub>B</sub>	3.18 (0.85) <sub>B</sub>	

*Note.* For each outcome, means with the same letter are not significantly different from each other at the value of  $p < .05$ ; interaction effects were not significant for self-blame and positive refocusing strategies.

### 2.3.3.2. Gender Differences in Cognitive Emotion Regulation Strategies

The results indicated that there was a significant gender difference on the combined cognitive emotion regulation strategies, Pillai's Trace = .02,  $F(5, 5020) = 24.62$ ,  $p < .001$ ,  $\eta_p^2 = .02$ . Univariate F-tests showed significant gender differences in the use of self-blame [ $F(2,5024) = 9.38$ ,  $p < .01$ ,  $\eta_p^2 = .00$ ], rumination [ $F(2,5024) = 69.98$ ,  $p < .001$ ,  $\eta_p^2 = .01$ ], catastrophizing

[ $F(2,5024) = 44.10, p < .001, \eta_p^2 = .01$ ], and positive refocusing [ $F(2,5024) = 8.53, p < .01, \eta_p^2 = .01$ ]. However, the boys ( $M = 3.10, SD = 0.91$ ) and girls ( $M = 3.09, SD = 0.91$ ) did not differ in terms of using *positive reappraisal*,  $F(2,5024) = 0.60, p = .440$ . Accordingly, the girls reported using *self-blame* (for girls:  $M = 2.93, SD = 0.99$ ; for boys:  $M = 2.83, SD = 0.94$ ), *rumination* (for girls:  $M = 3.45, SD = 0.97$ ; for boys:  $M = 3.19, SD = 1.00$ ) and *catastrophizing* (for girls:  $M = 3.00, SD = 0.97$ ; for boys:  $M = 2.80, SD = 0.97$ ) more than boys in response to negative situations. In contrast, the boys scored higher on positive refocusing strategy (for girls:  $M = 3.09, SD = 0.91$ ; for boys:  $M = 3.21, SD = 0.91$ ).

### **2.3.3.3. The Interaction between School Level and Gender in Cognitive Emotion Regulation Strategies**

The results showed that the interaction between school level and gender in relation to the combined cognitive emotion regulation strategies were significant, Pillai's Trace = .01,  $F(10, 10042) = 4.92, p < .001, \eta_p^2 = .01$ . Specifically, univariate  $F$  tests revealed that the interaction between school level and gender had a significant effect on rumination [ $F(2,5024) = 5.22, p < .01$ ], catastrophizing [ $F(2,5024) = 3.85, p < .05$ ], and positive refocusing [ $F(2,5024) = 9.60, p < .001$ ] strategies. However, the interaction effect was not significant for positive reappraisal [ $F(2,5024) = 1.18, p = .309$ ] and self-blame [ $F(2,5024) = 2.27, p = .104$ ] strategies.

According to post-hoc comparisons, the results showed that the girls ( $M = 3.11, SD = 1.02$ ) and boys ( $M = 2.97, SD = 1.04$ ) did not differ in rumination at the primary school level. In contrast, the girls reported higher levels of rumination than the boys in secondary school (for girls:  $M = 3.42, SD = 0.98$ ; for boys:  $M = 3.21, SD = 1.01$ ) and high school (for girls:  $M = 3.69, SD = 0.87$ ; for boys:  $M = 3.32, SD = 0.95$ ) (see Figure 1). In addition, the girls had higher scores on catastrophizing in primary school (for girls:  $M = 2.80, SD = 0.99$ ; for boys:  $M = 2.62, SD = 1.01$ ) and high school (for girls:  $M = 3.12, SD = 0.93$ ; for boys:  $M = 2.85, SD = 0.91$ ), whereas gender difference in terms of catastrophizing was not statistically meaningful in secondary level (for girls:  $M = 2.99, SD = 0.99$ ; for boys:  $M = 2.89, SD = 0.98$ ) (see Figure 2). Finally, there was no significant difference between the girls and boys in terms of positive refocusing in primary school (for girls:  $M = 3.36, SD = 1.07$ ; for boys:  $M = 3.25, SD = 1.09$ ). However, the girls had significant lower scores than the boys on positive refocusing in secondary school (for girls:  $M = 3.17, SD = 1.06$ ; for boys:  $M = 3.32, SD = 1.04$ ) and high school (for girls:  $M = 2.82, SD = 0.86$ ; for boys:  $M = 3.06, SD = 0.94$ ) (see Figure 3).

### **2.3.4. The Results for Testing the Link between Cognitive Emotion Regulation and Problem Behaviors**

A total of six hierarchical multiple regression analyses with three steps were conducted to examine the associations between cognitive emotion regulation strategies and adolescents'

internalizing and externalizing problems for each school level. To this end, the adolescents' gender (girls = 0, boys = 1) was included in the first step, and then five cognitive strategies were added in the second step. In the final step, interaction terms were included to test whether cognitive strategies work differently between genders. The regression results were summarized in Table 8.

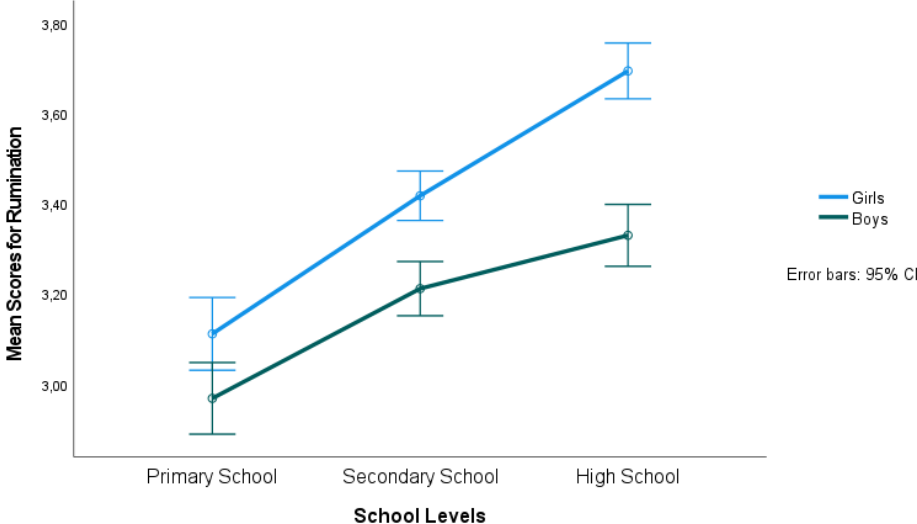


Figure 1. The Interplay Between School Level and Gender on Rumination

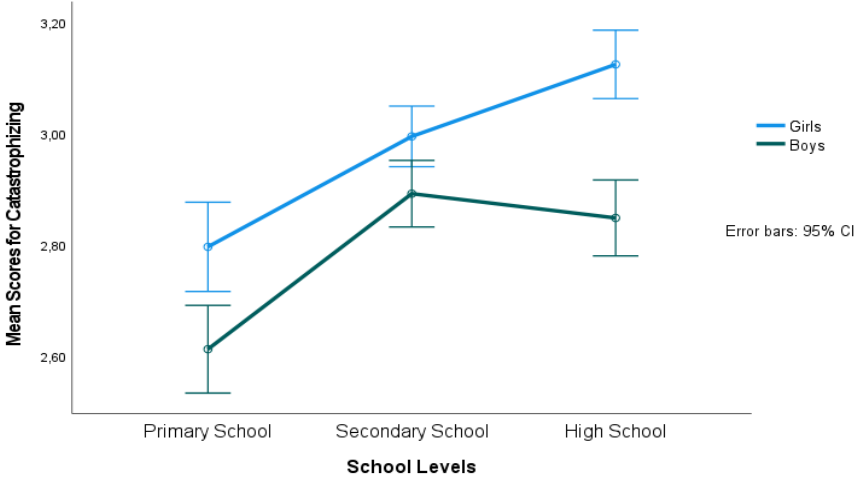


Figure 2. The Interplay Between School Level and Gender on Catastrophizing

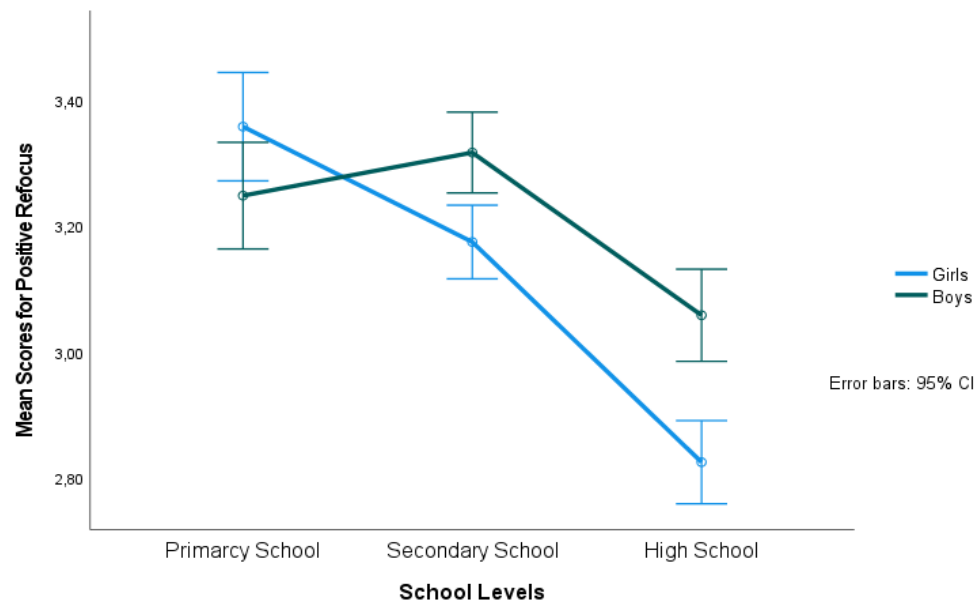


Figure 3. The Interplay Between School Level and Gender on Positive Refocusing

Regarding the analysis for predicting *internalizing* problems in *primary school*, the first step included adolescents' gender ( $F(1, 1015) = 4.90, p < .05, \text{Adjusted } R^2 = .00$ ) and the second step included five cognitive emotion regulation strategies ( $\Delta F(5, 1010) = 2.93, p < .05, \Delta R^2 = .01$ ) contributed significantly to the model. Although the overall model was still significant ( $F(11, 1005) = 2.76, p < .01, \text{Adjusted } R^2 = .02$ ), the contribution of the interaction step was not statistically meaningful ( $\Delta F(5, 1005) = 2.13, p = .060$ ). Given the results obtained in the final step, greater internalizing symptoms were reported for girls than boys ( $\beta = -.07, p < .05$ ). Also, more frequent use of positive reappraisal was associated with lower levels of internalizing problems ( $\beta = -.15, p < .05$ ). Apart from these, other emotion regulation strategies or gender interactions were not found significant in relation to internalizing problems in primary school.

With respect to *externalizing* problems, the gender and emotion regulation strategies added in the first two steps significantly improved the model with  $F(1, 1020) = 5.69, p < .05, \text{Adjusted } R^2 = .01$  and ( $\Delta F(5, 1015) = 2.27, p < .05, \Delta R^2 = .01$ , respectively). The model did not show a significant improvement with adding interaction terms in the third step ( $\Delta F(5, 1010) = 1.34, p = .243$ ). Nevertheless, the model was still significant ( $F(11, 1010) = 2.17, p < .05, \text{Adjusted } R^2 = .01$ ). Accordingly, only gender ( $\beta = .08, p < .05$ ) was significantly associated with externalizing problems, suggesting that boys are more likely to have externalizing problems

in primary school. However, neither of the cognitive emotion regulation strategies predicted externalizing problems at this school level.

Regarding the analysis for predicting *internalizing* problems in *secondary* school, the results showed that addition of gender ( $F(1, 1877) = 26.35, p < .001, \text{Adjusted } R^2 = .01$ ) and cognitive strategies ( $\Delta F(5, 1872) = 13.59, p < .001, \text{Adjusted } R^2 = .04$ ) in the first two steps significantly contributed the model. The interaction terms did not improve the model in the third step ( $\Delta F(5, 1867) = 1.89, p = .092$ ). Nevertheless, the regression model was still significant in overall. ( $F(11, 1867) = 9.54, p < .001, \Delta R^2 = .05$ ). According to the results found in the final step, internalizing problems were more likely observed among adolescent girls at secondary school ( $\beta = -.10, p < .001$ ). In addition, positive refocusing strategy ( $\beta = -.12, p < .01$ ) negatively predicted internalizing problems. In contrast, self-blame ( $\beta = .07, p < .05$ ) and catastrophizing ( $\beta = .16, p < .001$ ) strategies were positively associated with internalizing problems in secondary school. However, neither of other strategies nor their gender interactions were significant.

Regarding *externalizing* problems, the results showed that gender in the first step did not contribute significantly to the regression model. ( $F(1, 1873) = 3.48, p = .062$ ). Next, the model significantly improved with the addition of cognitive strategies in the second step ( $F(5, 1868) = 7.132, p < .001, \Delta R^2 = .02$ ). However, the contribution of interaction terms was non-significant in the third step ( $F(11, 1863) = 0.98, p = .429, \Delta R^2 = .02$ ). The overall model was significant ( $F(11, 1863) = 4.01, p < .001, \text{Adjusted } R^2 = .02$ ). In the final step, the results showed that greater externalizing problems were reported for adolescent boys than girls ( $\beta = .05, p < .05$ ). Moreover, positive refocusing ( $\beta = -.11, p < .01$ ) and rumination ( $\beta = -.10, p < .01$ ) negatively predicted externalizing problems at secondary school. In contrast, self-blame ( $\beta = .09, p < .05$ ) and catastrophizing ( $\beta = .10, p < .05$ ) strategies were positively associated with externalizing problems in this school level.

Regarding the analysis for predicting *internalizing* problems in *high school*, the first step included adolescents' gender ( $F(1, 1345) = 73.78, p < .001, \text{Adjusted } R^2 = .05$ ) and the second step included five cognitive emotion regulation strategies ( $\Delta F(5, 1340) = 13.30, p < .001, \Delta R^2 = .05$ ) contributed significantly to the model. The addition of interaction terms did not statistically improve the regression model ( $\Delta F(5, 1335) = 1.66, p = .142$ ). Nevertheless, the overall model was still significant at the final step ( $F(11, 1335) = 13.84, p < .001, \Delta R^2 = .10$ ). Accordingly, the results showed that internalizing problems were more common among adolescent girls ( $\beta = -.21, p < .001$ ) in high school.

In addition, positive refocusing ( $\beta = -.11, p < .05$ ) negatively predicted internalizing problems, while self-blame ( $\beta = .17, p < .001$ ) and catastrophizing ( $\beta = .12, p < .01$ ) positively predicted internalizing problems in high school. Apart from these, other emotion regulation strategies or gender interactions were not found significant in relation to internalizing problems in this school level.

In terms of *externalizing* problems, the gender and emotion regulation strategies added in the first two steps significantly improved the regression model with  $F(1, 1344) = 4.83, p < .05$ , Adjusted  $R^2 = .00$  and  $\Delta F(5, 1339) = 4.91, p < .001, \Delta R^2 = .02$ , respectively. The addition of interaction step was not significantly contributed the model ( $\Delta F(5, 1334) = 2.15, p = .057$ ). However, the overall model was significant ( $\Delta F(5, 1334) = 3.67, p < .001$ ). Accordingly, in the last step, the results showed that externalizing problems did not differ between adolescent girls and boys ( $\beta = -.05, p = .092$ ). In high school level, catastrophizing was the only strategy that predicting positively externalizing problems ( $\beta = .15, p = .001$ ). Neither of the interaction terms significantly predicted externalizing problems.

Overall, the hypothesized model explained 3%, 5%, and 10% of the variance in internalizing problems for primary, secondary and high school levels, respectively. On the other hand, it accounted for 2%, 2%, and 3% of the variance in externalizing problems for primary, secondary and high school levels, respectively. Taken together, the results suggest that as adolescents get older, both gender and cognitive emotion regulation strategies explain more variance in internalizing problems, although the effect sizes are still small.

## **2.4. Discussion**

Adolescence is known as a period of life in which important transformations are seen in terms of emotional development (Hollenstein & Loughheed, 2013). Specifically, the rapid and remarkable cognitive growth that occurs during adolescence allows adolescents to add a variety of cognitive strategies to their emotion regulation repertoire to cope with stressful experiences (Garnefski et al., 2007; Sabatier et al., 2017). However, cognitive gains during adolescence are accompanied by many social and emotional challenges (Eccles, 1999), and the ways in which adolescents manage negative emotions related to these challenges play a significant role in their psychological functioning (Compas et al., 2017; Garnefski & Kraaij, 2006). In this respect, past studies have shown that maladaptive cognitive strategies contribute to the development of various psychopathologies such as internalizing and externalizing

Tablo 8. Regression Coefficients for Predicting Problem Behaviors

	Primary School						Secondary School					
	Internalizing			Externalizing			Internalizing			Externalizing		
	B	$\beta$	<i>p</i>	B	$\beta$	<i>p</i>	B	$\beta$	<i>p</i>	B	$\beta$	<i>p</i>
<b>Model 1</b>												
Intercept	.34		<.001	.18		<.001	.43		<.001	.18		<.001
Gender	-.03	<b>-.07</b>	.027	.03	<b>.07</b>	.017	-.07	<b>-.12</b>	<.001	.02	.04	.062
<b>Model 2</b>												
Intercept	.34		<.001	.18		<.001	.42		<.001	.18		<.001
Gender	-.03	<b>-.07</b>	.029	.03	<b>.08</b>	.014	-.06	<b>-.10</b>	<.001	.02	<b>.05</b>	.031
Refocusing	-.01	-.03	.490	-.01	-.03	.409	-.02	<b>-.07</b>	.024	-.01	<b>-.07</b>	.020
Reappraisal	-.03	<b>-.10</b>	.019	-.01	-.07	.134	-.03	<b>-.08</b>	.009	-.01	-.03	.380
Rumination	-.01	-.03	.572	.00	.01	.874	-.00	-.01	.896	-.01	-.05	.123
Self-Blame	.01	.05	.234	.01	.06	.132	.01	.05	.106	.01	.06	.031
Catastrophizing	.02	.07	.092	.01	.06	.149	.04	<b>.14</b>	<.001	.02	.09	.005
<b>Model 3</b>												
Intercept	.35		<.001	.18		<.001	.42		<.001	.18		<.001
Gender	-.03	<b>-.07</b>	.026	.03	<b>.08</b>	.013	-.06	<b>-.10</b>	<.001	.02	<b>.05</b>	.030
Refocusing	-.01	-.05	.385	-.01	-.04	.516	-.03	<b>-.12</b>	.003	-.02	<b>-.11</b>	.008
Reappraisal	-.04	<b>-.15</b>	.015	-.01	-.04	.522	-.01	-.04	.362	.00	.02	.722
Rumination	-.02	-.09	.192	-.00	-.01	.864	-.02	-.06	.160	-.02	<b>-.10</b>	.032
Self-Blame	.02	.08	.189	.01	.07	.252	.02	<b>.07</b>	.047	.02	<b>.09</b>	.019
Catastrophizing	.01	.05	.409	-.00	-.02	.796	.04	<b>.16</b>	<.001	.02	<b>.10</b>	.019
Refocusing x G	.01	.03	.646	.00	-.00	.991	.03	.08	.051	.01	.05	.190
Reappraisal x G	.02	.06	.337	.01	-.05	.438	-.03	-.06	.193	-.02	-.06	.167
Rumination x G	.03	.09	.211	-.00	.04	.558	.04	.10	.051	.02	.07	.151
Self-Blame x G	-.01	-.04	.483	-.00	-.00	.947	-.02	-.05	.257	-.01	-.04	.295
Catastrophizing x G	.01	.03	.668	.03	.11	.084	-.02	-.04	.349	-.00	-.01	.801



Table 8. (cont'd). Regression Coefficients for Predicting Problem Behaviors

	<b>High School</b>					
	Internalizing			Externalizing		
	<b>B</b>	<b><math>\beta</math></b>	<b><i>p</i></b>	<b>B</b>	<b><math>\beta</math></b>	<b><i>p</i></b>
<b><i>Model 1</i></b>						
Intercept	.52		<.001	.21		<.001
Gender	-.14	<b>-.23</b>	<.001	-.02	<b>-.06</b>	.028
<b><i>Model 2</i></b>						
Intercept	.51		<.001	.21		<.001
Gender	-.13	<b>-.20</b>	<.001	.02	-.04	.113
Refocusing	-.02	<b>-.08</b>	.023	-.01	<b>-.07</b>	.044
Reappraisal	-.01	-.03	.441	.01	.02	.539
Rumination	-.02	-.06	.127	-.02	-.07	.069
Self-Blame	.05	.13	<.001	.01	.04	.285
Catastrophizing	.04	.11	<.001	.03	<b>.12</b>	<.001
<b><i>Model 3</i></b>						
Intercept	.51		<.001	.21		<.001
Gender	-.13	<b>-.21</b>	<.001	-.02	-.05	.092
Refocusing	-.04	<b>-.11</b>	.016	-.02	-.09	.062
Reappraisal	-.01	-.02	.642	.02	.08	.122
Rumination	-.03	-.08	.120	-.01	-.05	.380
Self-Blame	.06	<b>.17</b>	<.001	.01	.06	.145
Catastrophizing	.04	<b>.12</b>	.007	.03	<b>.15</b>	.001
Refocusing x G	.03	.06	.185	.01	.04	.360
Reappraisal x G	.01	.01	.821	-.02	-.07	.149
Rumination x G	.02	.04	.493	-.01	-.03	.589
Self-Blame x G	-.04	-.08	.060	-.01	-.04	.350
Catastrophizing x G	-.01	-.02	.643	-.01	-.04	.400

problems, whereas adaptive strategies reduce the risk of developing such problem behaviors (Karnilowicz et al., 2022; Kraft et al., 2023; Rey Peña, & Extremera Pacheco, 2012).

Importantly, findings in the literature consistently indicate that there is an increasing trend in some forms of psychopathology, especially depression, during adolescence (Powers & Casey, 2015). Moreover, previous research has emphasized adolescence in relation to emergence of gender differences in incidence of internalizing problems (Jose & Brown, 2008; Rood et al., 2009). Taken together, adolescence seems to be a good candidate to investigate developmental phase- and gender-related differences in cognitive emotion regulation strategies in order to shed light on substantial increase in emotional problems during this period. Furthermore, examining the relationship between cognitive strategies and psychopathology across developmental phases and gender would help to understand who benefits from or is negatively affected by which strategies, and perhaps provide insight into age- and gender-related upward

trends in internalizing and externalizing problems during adolescence. To this end, the present study involved students and their mothers from three school levels, corresponding to the pre-adolescence, early adolescence and middle adolescence phases of adolescence. First, developmental phase and gender differences in terms of cognitive emotion regulation strategies were examined. Next, the relationships between cognitive emotion regulation strategies and internalizing and externalizing problems in adolescents were tested at different developmental phases, including adolescents' gender as a possible moderator. In this section, the findings obtained were discussed below in the order of hypotheses in the light of the literature.

#### **2.4.1. The Results on the Use of Cognitive Emotion Regulation Strategies**

A factorial MANOVA analysis was used to examine school level (primary, secondary and high school) and gender differences in cognitive emotion regulation strategies such as self-blame, rumination, catastrophizing, positive reappraisal, and positive focusing. The interplay between school level and gender was also tested for each strategy. In this section, the current findings regarding main and interaction effects were discussed respectively.

##### **2.4.1.1. Results for School Level Effect**

Firstly, with respect to effect of school level (*hypothesis 1a*), it was hypothesized that there would be an increase in the use of cognitive emotion regulation strategies depending on adolescents' school level. In this sense, the findings largely support the hypothesis for emotion regulation strategies other than positive refocusing. Accordingly, there was a significant increase in the use of self-blame and rumination strategies at each school level from primary school to high school. In addition, a significant increase was observed between primary and secondary school levels in catastrophizing and positive reappraisal strategies; however, the increase between secondary school and high school levels was not revealed as significant. Some researchers suggest that the maturation of the prefrontal cortex during adolescence enables adolescents to internally evaluate situations and control negative emotional stimuli in a cognitive way (Garnefski et al., 2007; Sabatier et al., 2017). In this respect, past studies have emphasized age-related proficiency in cognitive emotion regulation, mostly through an increase in cognitive reappraisal strategy (McRae et al., 2012; Silvers et al., 2012). However, the findings of the current study suggest that development in emotion regulation skills is not necessarily to be in adaptive direction. That is, the increase in adaptive strategies such as reappraisal as well as maladaptive emotion regulation strategies such as rumination, self-blame and catastrophizing in relation to school level supports the view that the use of cognitive emotion regulation tends to increase with cognitive growth during adolescence, regardless of

the adaptiveness of the strategies (Garnefski et al., 2006; te Brinke et al., 2021). In particular, the current findings consistently emphasize the differences between primary and secondary school, suggesting that early adolescence is a critical period for the development of cognitive emotion regulation. Importantly, the results indicated that, in contrast to positive reappraisal, the increase in maladaptive strategies such as self-blame and rumination persists at the high school level. This finding points to middle adolescents as a particular risk group and provide insight into the increase in internalizing and externalizing problems reported in the literature during this period (Steinberg & Morris, 2001).

In contrast to this pattern seen in the aforementioned cognitive emotion regulation strategies, it was found that positive refocusing did not increase with school level; in fact, there was a significant decrease in the use of this strategy at the high school level. This finding regarding positive refocusing seems to be contrary to expectations and inconsistent with the findings of Garnefski et al. (2007), who showed a significant increase in all cognitive strategies from early to mid-adolescence. However, the literature on distraction strategy may support the unexpected results obtained for positive refocusing in this study. Namely, positive refocusing refers to shifting attentional focus away from the emotional stimulus. That is, people who refocus their attention think of better things that are unrelated to the negative event, rather than dwelling on the emotional component of the event (Garnefski et al., 2001). In this sense, it can be said that the positive refocusing measured in the current study is similar to the distraction strategy in the literature. Past research has shown that preschool children engage in cognitive distraction to reduce emotional intensity in a delay of gratification task (Mischel et al., 1972). This suggests that positive refocusing or distraction as a cognitive emotion regulation strategy can be observed at earlier phases of development compared to other cognitive strategies (Gross & Thompson, 2006). Thus, since pre-adolescents may already have enough cognitive capacity and sufficient experience in the refocusing strategy, there may not be room for its improvement later in adolescence. In support of this view, the highest mean score among the cognitive regulation strategies examined was obtained for positive refocusing ( $M = 3.30$ ) at the primary school level. In contrast, positive refocusing was the least used strategy at the high school level with a mean of 2.93. In this regard, some researchers suggest that when the emotional event cannot be avoided or is related to their long-term goals, people prefer to use the distraction strategy less (Sheppes et al., 2014). Research has shown that the ability of abstract thinking and reasoning, which enables setting long term goals, develops substantially during adolescence (Steinberg, 2005). In addition, adolescents in high school may be more likely to face a variety of school-related and interpersonal challenges that can cause emotional crises and cannot be easily avoided. For example, De Goede and colleagues (2009) found that

adolescents experience increasing levels of conflict with their mothers from early to middle adolescence.

Therefore, since the positive refocusing strategy may not help older adolescents to cope with the challenges in their developmental phases, they may have preferred to use this strategy less. In support of this view, Theurel and Gentaz (2018) reported an age-related decline in positive refocusing strategy in adolescents between the ages of 12 and 15. Similarly, Sanchis-Sanchis and colleagues (2020) found less use of positive refocusing in adolescents aged 13-16 years compared to pre-adolescents aged 9-12 years.

#### **2.4.1.2. Results for Gender Effect**

Secondly, with respect to gender effect (*hypothesis 1b*), it was hypothesized that self-blame, rumination and catastrophizing strategies, which are putatively classified as maladaptive in the literature, would be used more frequently by girls. However, since previous findings have yielded inconsistent results in terms of adaptive strategies such as positive refocusing and reappraisal (Garnefski et al., 2018; Mumtaz et al., 2017; Öngen, 2010; te Brinke et al., 2021; Zagaria et al., 2023), gender differences in these strategies were examined without a specific hypothesis. The results showed that girls used self-blame, rumination and catastrophizing strategies more frequently, in line with expectations. However, no consistent gender-specific orientation has been found for emotion regulation strategies that are usually categorized as adaptive in the literature. Namely, it was found that when faced with a negative situation, boys resorted to positive refocusing more than girls, but boys and girls did not differ in the use of positive reappraisal strategy. Accordingly, the current findings do not seem to support the view that women tend to use more emotion regulation strategies in general, as they typically have more experience with emotions (Nolen-Hoeksema, 2012; te Brinke et al., 2021). Rather, the results seem largely in line with the view that women tend to cope ineffectively with their emotions possibly due to their more intense emotional experiences (Webb et al., 2012). In addition, the gender-specific preferences in emotion regulation strategies found in this study appear largely consistent with gender role theories. Specifically, gender role theories suggest that women prefer to focus on the emotional aspects of their experiences by expressing and dwelling on what they feel, while men prefer to suppress or withdraw from such emotional experiences (Nolen-Hoeksema, 2012). Possibly as a result of this gender-specific orientation, past research has found that social and emotion-focused regulation strategies are more likely used by women, whereas emotion concealing and avoidance strategies are more common among men (Zimmerman & Iwanski, 2014). In support of this research, the current study found that girls focused on their emotions or negative experiences through self-blame,

ruminating or catastrophizing, while boys preferred to divert their attention through positive refocusing. In this sense, it can be said that the present findings provide empirical evidence that (pre)adolescent children show a tendency in their emotion regulation preferences according to their gender roles.

Apart from these strategies, no significant gender difference was found in terms of positive reappraisal in this study. In this regard, previous studies have shown inconsistent results for the 12-18 age range. Some of them reported higher use of reappraisal in boys (Mumtaz et al., 2017; Öngen, 2010). On the other hand, others found no difference between boys and girls, which is in line with the current findings (Duarte et al., 2015; Garnefski et al., 2018; Zagaria et al., 2023). Taken together, these inconsistent results in the literature may point to more complex dynamics for positive reappraisal. For example, McRae et al. (2008) indicated that cognitive reappraisal was a less effortful strategy for males at the neural level, although no gender differences were found at the behavioral level for late adolescents (18-22 years). More specifically, they found that even though both male and female participants reported similar experiences for reappraisal based on self-reports, male participants showed lesser increasing activity in prefrontal cortex but more reducing activity in amygdala than female counterparts during reappraisal. In a similar line of research, it may be possible to observe more robust gender differences in reappraisal by using neural measures rather than self-reports. Or, alternatively gender differences in reappraisal may be qualitative (how you use it) rather than quantitative (how often you use it).

#### **2.4.1.1. Results for Interaction Effect between School Level and Gender**

Lastly, the interactions between school level and gender (*hypothesis 1c*) were examined in relation to the use of five cognitive emotion regulation strategies. The existing literature emphasizes the 11-14 age range in terms of the emergence of gender differences in some maladaptive emotion regulation strategies and internalizing problems (e.g., Gutman & Codiroli McMaster, 2020; Jose & Brown, 2008). On this basis, it was hypothesized that boys and girls would differ in cognitive strategies during early and middle adolescence corresponding to the period after primary school. The results supported the hypothesis for rumination and positive refocusing, showing that although boys and girls reported similar levels of rumination and positive refocusing in primary school, girls engaged in more rumination and less positive refocusing in secondary and high school. As mentioned above, women and men tend to use emotion regulation strategies in line with gender stereotypes about emotions (Nolen Hoeksema, 2012; Zimmerman & Iwanski, 2014).

Similarly, the findings of study 1 adolescents may prefer to use some emotion regulation strategies to others in accordance with their gender roles starting from the secondary school level.

Relatedly, the gender intensification theory (Hill & Lynch, 1983) posits that with the changes in adolescence, gender roles become more prominent in children's lives, and adolescents feel more pressure to conform to the gender roles ascribed to them in society. In support of this theory, Broderick and Korteland (2002) found that with respect to emotion regulation, both boys and girls in secondary school believed that it was more appropriate for boys to use distraction compared to rumination. Furthermore, these gender-related attributions in emotion regulation strategies (rumination-femininity and distraction-masculinity) have been reported to become more pronounced in older grade levels. In a similar vein, Jose and Brown (2008) revealed that adolescent girls begin to use rumination more than boys after the age of 12. Therefore, it can be concluded that the interactions of gender and school level in relation to rumination and distraction are consistent with the literature.

Regarding the catastrophizing strategy, the results showed that although girls in primary and high school tended to catastrophize more than boys in stressful or negative events, boys and girls in secondary school did not differ in this regard. More specifically, both genders showed an increase in the use of the catastrophizing strategy from primary to secondary school, but the rate of increase was sharper for boys. Moreover, in contrast to a steady increase with school level in girls, there was no significant increase in the catastrophizing strategy from secondary school to high school in adolescent boys. Taken together, the results suggest that secondary school is a particularly risky period for early adolescent boys with respect to catastrophizing style of emotion regulation. A steeper slope of increase in catastrophizing for boys at the secondary level may be due to gender-specific maturation in the emotional brain regions during adolescence. Specifically, secondary school may be a time when there are significant changes in the way boys experience emotional events. For example, Giedd and colleagues (1997) demonstrated that although the volume of amygdala which governs emotional processes related to threat increased in both sexes during adolescence, the slope of this increase was greater for males after the age of 11. In the literature, catastrophizing is identified as the exaggeration of threat and harm associated with negative experiences (Garnefski & Kraaij, 2018). Thus, a larger amygdala during secondary school may predispose adolescent boys to catastrophizing appraisals and cause them to lose the favorable situation in terms of catastrophizing before puberty.

However, in contrast to the steady increase in girls, the results showing that there was no significant difference between secondary and high school in terms of catastrophizing in boys reduce the likelihood of this possible explanation. Nevertheless, it is also possible that even if adolescent males in high school continue to perceive increased threat and harm related to negative situations, by mid-adolescence they may have added more gender-specific strategies to their regulatory repertoire to cope with such situations, as suggested by gender intensification theory. For example, Budziszewska and colleagues (2020) reported differences in high school boys' and girls' narratives about anger. Specifically, girls talked about their anger experiences in a more ruminative and catastrophizing style, while boys described such experiences in more positive and behavioral terms. On this basis, the findings for catastrophizing in the high school group may be explained by the fact that boys preferred behavioral strategies that are more compatible with gender roles, such as distraction, suppression or physical aggression, to more ruminative style strategies such as catastrophizing. Although the current findings for positive refocusing partially support this view, it would be useful for future studies to examine the relationship between threat perception, gender roles and different emotion regulation strategies across adolescence.

Finally, apart from the main effects mentioned above, school level and gender interactions did not yield significant results for self-blame and positive reappraisal strategies. Nevertheless, the mean scores of boys and girls at different school levels imply that girls tend to blame themselves more than boys for negative events, especially in high school. Indeed, a number of studies with adolescents aged 13-18 have shown that self-blame is more common in girls than boys (Duarte et al., 2015; Garnefski et al., 2018; Zagaria et al., 2013). On the other hand, Öngen (2010) did not find a significant difference between girls and boys in this respect in her study conducted with high school students in Türkiye. However, none of these studies included a pre-adolescent sample or examined how self-blame strategies change across school levels. For this reason, it does not seem possible to directly explain the non-significant interaction findings obtained in the current study, contrary to the observed tendency towards self-blame, with the findings of previous studies. Nevertheless, the present results can be interpreted that gender differences between girls and boys in terms of self-blame have become more apparent over time, but that these differences have not been fully captured at the school level. Moreover, some researchers suggest that self-blame can be divided into two dimensions such as characterological and behavioral self-blame and that girls in particular score higher on characterological self-blame (i.e., attributing blame to characteristics rather than behavior) (Yang et al., 2022).

Therefore, Given the identity development during adolescence, gender differences especially in this dimension might be expected to be more pronounced at later phases of adolescence. On this basis, it would be useful for future studies to examine the self-blame strategy by considering its two different sub-dimensions in order to specify the differences regarding the interplay between gender and school level. Regarding positive reappraisal, the results imply that both girls and boys tend to use positive reappraisal more with the transition to secondary school, without any interaction effect. In this sense, the current findings seem to support the neuroimaging results reported by McRae et al. (2012). Accordingly, the results indicate that regardless of gender, there are substantial developments during adolescence in terms of the ability to positively revise negative situations experienced.

#### **2.4.2. Results on the Link Between Cognitive Emotion Regulation Strategies and Problem Behaviors**

The relationships between five cognitive emotion regulation strategies and internalizing and externalizing problems were tested with hierarchical multiple regression analyses separately for each school level. On the basis of theoretical predictions and empirical findings, it was expected that putatively maladaptive strategies (i.e., self-blame, rumination and catastrophizing) positively but adaptive strategies (i.e., positive reappraisal and positive refocusing) negatively would predict behavioral problems such as internalizing and externalizing. Moreover, as previous research has suggested that the relationship between specific emotion regulation strategy and psychopathology evolves over time (Compas et al., 2017; Rood et al., 2009), we expected stronger effects of hypothesized links for higher schooling levels. Finally, the moderating role of gender was examined exploratory to investigate whether cognitive strategies function similarly for boys and girls in relation to internalizing and externalizing problems.

In terms of *hypothesis 2a*, with the exception of rumination, the results largely supported the previously reported separation of cognitive strategies into adaptive and maladaptive strategies (Garnefski et al., 2001; Wytykowska et al., 2021). Accordingly, where the relationship is significant, positive reappraisal and positive refocusing are negatively related to problem behaviors, whereas self-blame and catastrophizing are positively related to problem behaviors, especially to internalizing behaviors. In this sense, the present findings are consistent with cognitive theory, which argues that thinking patterns that include negative attributions about oneself, the world and the future predispose individuals to internalizing problems such as depression (Beck, 1967). In the same vein, more positive cognitions attributed to experiences help individuals cope more adaptively with negative situations and attenuate internalizing problems (Garnefski et al., 2005).



However, according to the results of the present study, rumination was excluded from this classification of maladaptive and adaptive strategies. That is, contrary to expectations, rumination was not positively associated with either internalizing or externalizing problems at any school level. Interestingly, at the final step, rumination negatively predicted early adolescents' externalizing problems in the secondary school. In the literature, rumination is typically defined as passive and repetitive concentration on feelings and thoughts related to the negative situation (Garnefski et al., 2001). According to response style theory, the repetitive and passive nature of rumination makes it a maladaptive self-reflection strategy, because rumination on the causes and consequences of negative feelings prevents one from actively dealing with problems (Nolen-Hoeksema et al., 2008). Therefore, rumination is considered a remarkable risk factor for developing emotional problems, especially depression (Nolen-Hoeksema, 1991). Indeed, numerous studies have supported the positive link between rumination and affective psychopathology in adolescents as well as adults (Aldao et al., 2010; Schafer et al., 2017). However, some researchers have shown that rumination has two components, namely *brooding* (i.e., passively dwelling on unattained standards and negative aspects of the situation) and *reflection* (i.e., analyzing the causes of current feelings and thoughts), and that these have differential effects on depressed mood (Treyner et al., 2003). Specifically, unlike brooding, the reflection subtype of rumination is believed not to increase negative mood and thus not to be associated with emotional problems such as depression. Consistent with this view, a growing number of studies have found that brooding, but not reflection, predicts depression in children and adolescents (Burwell & Shirk, 2007; Lopez et al., 2009; Verstraeten et al., 2010). Relatedly, when the scale items used in the current study were reviewed by considering the two-factor structure determined by Treyner et al. (2003), it was observed that the rumination subscale contains statements representing more reflection (e.g., “neden bu şekilde hissettiğimi anlamak ister ve tekrar tekrar bu durumu düşünürüm”), while the items in the catastrophizing subscale have some similarity with brooding (e.g., “olanların ne kadar kötü olduğunu tekrar tekrar düşünürüm”). A possible explanation for the non-significant results for rumination could be that the rumination scale in this study encompassed both reflection and brooding dimensions, and the contribution of rumination to emotional problems was not significant after controlling for other maladaptive strategies. Also, in such a situation, trying to analyze one's situation (reflective rumination) can reduce one's externalizing symptoms by buffering impulsivity and aggression in response to negative events. Although the positive correlation of rumination with other strategies, both adaptive and non-adaptive, provides partial support for this argument about two-factor structure, empirical testing of this hypothesis requires future research.

In terms of the relationship between cognitive emotion regulation strategies and emotional problems across school levels (*hypothesis 2b*), the hypothesis was partially supported. In particular, none of the hypothesized maladaptive strategies predicted *internalizing problems* in primary school. On the contrary, maladaptive strategies such as self-blame and catastrophizing were positively related to internalizing problems in secondary and high school. In addition, positive refocusing, as an adaptive strategy was associated with fewer symptoms of internalizing in secondary and high school. Accordingly, after controlling for gender, the cognitive regulation strategies examined in this study explained 1%, 4%, and 5% additional variance for internalizing problems in primary, secondary, and high school, respectively. Thus, although effect sizes are still very small, the association between especially maladaptive cognitive emotion regulation strategies and internalizing problems appears to emerge and strengthen during adolescence, consistent with the hypothesis. In this regard, the current results seem to support the previous study that found a positive link between cognitive biases and anxiety symptoms only in adolescents rather than pre-adolescents (Farrell et al., 2012).

Specifically, the findings of this study emphasize secondary school years in terms of the relationship between emotion regulation and internalizing problems. Similar findings have previously been reported for rumination and positive reappraisal, with an emphasis on age 11 and above, which corresponds to the secondary school period (Compas et al., 2017; Rood et al., 2009). Although the current findings have established this link for cognitive strategies other than rumination and reappraisal, it seems consistent for the effectiveness of cognitive emotion regulation skills to be observed during early adolescence. There are two possible empirically supported views that emotion regulation strategies as a risk or promotive factor will be seen in the older group rather than in primary school. Firstly, regulatory strategies involving cognitive attributions require a certain level of cognitive development and sufficient practice, mostly acquired during early adolescence, to predict psychological functioning (Zimmer-Gembeck, & Skinner, 2016). On this basis, pre-adolescents in primary school may not have enough experience with cognitive strategies, quantitatively and qualitatively, for their effects to emerge. Secondly, children develop stability in their cognitive attributions over time (Cole et al., 2008). Accordingly, the repeated use of a particular strategy in similar contexts tends to become a habitual way of coping with stressors over time (Watkins & Nolen-Hoeksema, 2014). Notably, Zimmermann and Iwanski (2014) reported the smallest emotion regulation repertoire for middle adolescents compared to younger and older age groups. Therefore, the development of a preference for specific emotion regulation strategies and stability in these strategies may be necessary to observe their effectiveness on psychological functioning. In fact, there is some evidence in the present study to support both views.

First, except for positive refocusing, the use of cognitive strategies increases dramatically from primary to secondary school, suggesting that early adolescents resort to more cognitive strategies than pre-adolescents. Second, maladaptive and adaptive strategies were positively correlated with each other in primary school, suggesting that pre-adolescents do not show a steady preference for a single dimension. In contrast, correlational results indicate that maladaptive and adaptive strategies tend to differentiate from secondary school onwards, especially for girls. Taken together, the present findings imply that both quantitative and qualitative changes in the use of cognitive strategies over time are important for seeing their effects on emotional problems. However, the cross-sectional design of the current study is insufficient to provide an empirical basis for possible explanations, so future longitudinal studies are needed in this regard.

Parallel to internalizing problems, significant findings regarding *externalizing problems* were also first observed in the secondary school period. That is, self-blame and catastrophizing positively and positive refocusing and rumination negatively predicted externalizing problems in secondary school.

In this respect, the possible explanations given for internalization problems can also be considered valid here. However, the present results suggest that the effects of cognitive strategies on externalizing symptoms may not be consistent across adolescence. Namely, unlike the internalizing problems, only catastrophizing positively predicted externalizing problems at the high school level. Moreover, the variances explained by cognitive strategies were much smaller for externalizing behaviors and, contrary to expectations, did not show a remarkable increase with higher school level (1%, 2%, and 2% respectively for school levels). In fact, the current findings in this regard appear to be consistent with some previous studies showing that cognitive emotion regulation strategies are often associated with internalizing rather than externalizing behaviors (Aldao et al., 2010; Garnefski et al., 2005; te Brinke et al., 2021). These results make us consider the possibility of other factors that may obscure the effects of cognitive emotion regulation strategies on externalizing problems. For example, in order to be accepted by their peer groups, adolescents tend to conform to their peers by changing their self-evaluations according to peer norms and act accordingly to avoid rejection (Blakemore & Mills, 2014). In such a situation, the peer group norms, rather than how the adolescents individually interpret or evaluate events, may be more predictive of their externalizing reactions to events, especially for middle adolescents.

In addition, internalizing problems are conceptually related to the dysregulation of internal emotions such as sadness and distress, whereas externalizing problems are typically associated

with the dysregulation of external emotions such as anger (Barrett, 2013; Eisenberg et al., 2017). In this context, the previous findings suggest that emotion regulation strategies which people use vary according to types of emotions (Dixon-Gordon et al., 2015; Zimmermann & Iwanski, 2014). In this study, participants were asked about the emotion regulation strategies they use when something bad happens to them, without reference to any particular type of emotion. Nevertheless, they might think about situations that were more likely to cause distress or sadness than anger, and report their strategies accordingly. Further on, cognitive strategies overall may be more likely preferred to manage distress than anger. Recently, te Brinke and colleagues (2021) showed that in secondary and high school adolescents, cognitive emotion regulation strategies were more common in those with internalizing problems, while maladaptive behavioral regulation strategies were more common in those with externalizing problems. Accordingly, behavioral strategies rather than cognitive ones may become more predictive for externalizing strategies across adolescence. In sum, given the link between cognitive regulation of internal emotions and internalizing problems, this may explain the more consistent and relatively strong associations observed for internalizing rather than externalizing problems.

Furthermore, the current results point to specificity of cognitive strategies depending on developmental phase. That is, positive reappraisal was associated with fewer internalizing problems only in primary school. In contrast, adolescents in secondary and high school benefited from positive refocusing rather than reappraisal in this regard. Given previous findings reporting a negative association between positive reappraisal and internalizing problems in adolescents (Garnefski et al., 2005; Karnilowicz et al., 2022; Schäfer et al., 2017; Zhuang et al., 2020), the non-significant results for positive reappraisal in this study seem surprising. However, meta-analysis studies reported a weak relationship between positive reappraisal and internalizing problems (Aldao et al., 2010; Compas et al., 2017). More recently, Kraft and colleagues (2023) found in their meta-analytic review that reappraisal was weakly associated with depression but not anxiety in children and adolescents. Taken together with previous findings, the present results suggest that the reappraisal strategy may not always be adaptive, but instead some contextual variables may moderate the effectiveness of the reappraisal strategy on emotional problems in adolescents. For example, Troy et al. (2013) showed that situation controllability plays an important role in determining the impact of cognitive reappraisal on depression. Namely, reappraisal strategy for coping with controllable stressors was positively associated with depression, in contrast to situations where stressors were uncontrollable.

Following this logic, reframing rather than actively dealing with highly controllable stressors, such as social relationships or academic problems, might be expected to neutralize the promoting effect of the positive reappraisal strategy on internalizing problems in adolescents. Moreover, Sheppes and Meiran (2007) reported that strategy initiation time is an important moderator in predicting the effectiveness of a particular strategy in reducing negative emotions. More specifically, they showed that when negative emotions are already aroused, positive reappraisal emerges as a less effective strategy for regulating sadness. On the other hand, the distraction strategy was found to be effective in modulating sadness, even when used at later phases of emotional arousal. Adolescence is characterized by heightened emotional reactivity and sensitivity, indicating that adolescence experience more frequent and intense emotions (Powers & Casey, 2015; Steinberg, 2005). This readiness to emotional arousal might explain why adolescents in secondary and high school benefited from positive refocusing rather than reappraisal, in line with Sheppes and Meiran's (2007) findings.

Finally, the exploratory hypothesis regarding whether the effectiveness of cognitive strategies on internalizing and externalizing problems (*hypothesis 2c*) varies depending on the gender of pre-adolescents and adolescents was tested. Some researchers argue that girls and boys may be differentially affected by emotion regulation strategies and that this may therefore explain gender differences in psychopathology (Bender et al., 2012; Nolen-Hoeksema, 2012). However, the findings of the current study do not seem to support this view. That is, the results showed non-significant interaction effects for gender across all developmental phases when testing the relationship between cognitive emotion regulation strategies and externalizing and internalizing problems. In fact, previous studies have presented a mixed picture that the effect of emotion regulation on psychopathology differs depending on gender in adolescent samples. For example, the promoting role of positive reappraisal in depression was found for girls in one study (Duarte et al., 2015) and for boys in another study (Perchtold et al., 2019). Moreover, there is no consistency in previous studies on which strategies' effectiveness varies depending on gender. For example, the significant results reported for positive reappraisal could not replicated in Öngen (2010) and Garnefski and Kraaij (2018); however, the interaction between self-blame and gender was significant in these studies for opposite genders. That is, the former study reported a gender-specific positive association between self-blame and depression in high school boys, while the latter study showed the same link in secondary school girls. In addition to these contradictory results, many studies examining the relationship between emotion regulation strategies and problem behaviors in children and adolescents have not tested the moderating role of gender (Garnefski et al., 2005; Garnefski, & Kraaij, 2006; Kallay & Cheie, 2022; Zagaria et al., 2023; Zhuang et al., 2020).

Therefore, more research is needed before concluding whether pre-adolescent and adolescent girls and boys are at different risks or benefits in terms of the effects of cognitive emotion regulation strategies. Nevertheless, the inconsistent findings reported in previous studies and the non-significant findings in the current study raise the possibility that this interaction effect of gender with particular strategy may only occur under some conditions such as certain level of stress (e.g., high level of stress) or stressors (e.g., interpersonal). As the present data are based on a representative sample and have large sample sizes, the contribution of such confounding variables might be largely eliminated. Consequently, this may explain the non-significant interaction between gender and emotion regulation strategies on problem behaviors. Therefore, it would be useful in future studies to re-examine the relationship between emotion regulation strategies and problem behaviors across genders, taking into account specific conditions such as various stress levels or stressors.

## CHAPTER 3

### STUDY 2

#### 3.1. Introduction

##### 3.1.1. Overview

The hormonal, physical and cognitive changes that occur during adolescence bring with them a wide range of social, academic and psychological challenges. In this respect, adolescence is seen as a stressful developmental phase, as adolescents need to constantly adapt to these changes and manage challenges (Powers & Casey, 2015). In connection with this, many studies have shown that the frequency and intensity of negative emotions increase during adolescence and that the inability to effectively regulate these emotions puts adolescents at risk for various psychopathologies (Silk et al., 2003; Spear, 2000). That's why a better understanding of maladaptive emotion regulation during adolescence from a developmental perspective is important for providing support to adolescents and their parents, as well as for developing effective interventions to improve the mental health of adolescents.

Research in the field of developmental psychology points to the importance of the family context in the development of emotion regulation. In fact, numerous studies indicated that emotion regulation skills are acquired through the parent-child interactions in the process of emotion socialization (Morris et al., 2007). In this context, the existing findings have shown that parenting beliefs and behaviors constitute the dynamics of parent-child interaction, and therefore influence child development (Bornstein & Cheah, 2006). However, previous studies have mostly focused on infancy and early childhood with this respect. In contrast, surprisingly, little research has addressed parenting beliefs and behaviors in relation to maladaptive emotion regulation during adolescence. Therefore, the current study aimed to investigate the relationships between parenting beliefs and behaviors and maladaptive emotion regulation. More specifically, this study examined whether the mothers' shaming beliefs predict negative parenting (i.e., rejection and psychological control), which in turn predict adolescents' maladaptive emotion regulation strategies (i.e., rumination, self-blame and catastrophizing). In addition, since previous studies suggest that there may be differences in emotion regulation according to gender and developmental phases of adolescence, these variables were included as moderators in the proposed model.

In the following sections, the conceptual framework and relevant research findings regarding the proposed link between parenting beliefs, parenting behaviors, and adolescents' emotion regulation outcomes were presented. Subsequently, the present results were reported and then discussed in the light of the literature.

### **3.1.2. Emotion Socialization within the Family and Cultural Context**

The well-established theories in developmental psychology (e.g., Bronfenbrenner's ecological system theory, Vygotsky's socio-cultural theory and Super and Harkness's developmental niche theory) suggest that child development is shaped by dynamic interplay between child and surrounding environment. Since primary caregivers mainly constitute the child's immediate environment during critical periods of development, a large number of researchers have focused specifically on the familial context and parent-child interactions in relation to adaptive and maladaptive child outcomes (Morris et al., 2017). Indeed, numerous empirical evidence supports that from early in life, the familial context plays a significant role in a variety of developmental outcomes, including children's emotional development. In this regard, many researchers in developmental science agree that parents directly and indirectly influence the child's emotional processes in terms of how emotions are understood, experienced, expressed and regulated (Eisenberg et al., 1998; Morris et al., 2007). Relatedly, Morris and colleagues (2007) proposed *a tripartite model* in which parents directly influence their children's emotion regulation skills through modeling for emotion regulation, parenting behaviors, and emotional climate within the family. Accordingly, specific parental behaviors, such as the parent's reactions to the child's emotions, the way they talk about emotions, and the way they express their own emotions are considered to constitute the context for children's emotion socialization (Eisenberg et al., 1998). In this line of research, previous studies indicated that parental behaviors provide a framework for children to build their emotion regulation repertoire (i.e., strategies) and thus predict regulatory outcomes (i.e., regulated versus dysregulated emotional arousal) (Morris et al., 2017; Shipman, & Zeman, 2001). In this respect, parenting behaviors are classified into positive and negative parenting in the literature, largely according to the emotional availability of the parent and the emotional tone of parent-child interactions (Skinner et al., 2005). Empirical findings based on this classification have shown that positive parenting behaviors, characterized by greater emotional availability and positive emotional climate, are associated with adaptive emotion regulation, while negative parenting behaviors, characterized by denial of the child's emotional needs and hostile emotional climate, are associated with maladaptive emotion regulation in children and adolescents (Goagoses et al., 2023).



Theories that emphasize the importance of the interaction between parent and child also argue that the socialization process does not take place in isolation but within a cultural framework. Relatedly, some researchers suggest that cultural values are transmitted to the child through parental practices (Bornstein & Cheah, 2006). In line of this reasoning, Super and Harkness (1997) proposed *a developmental niche model* in which child development is embedded in culturally organized subsystems and their interactions. Two subsystems, namely parenting customs/practices, and parent's belief system is specifically included in the scope of this study. According to this, culturally regulated parenting beliefs about childrearing are seen as a motivational force for parenting behaviors, and thereby indirectly influence children's developmental outcomes (Harkness & Super, 2006). That is, parents have different beliefs about child-rearing practices and their effectiveness in terms of optimal child outcomes depending on the cultural values they have internalized. For example, a mother who believes in the importance of discipline and control in childrearing may adopt a parenting style in line with this and thus show restrictive parenting behaviors. In contrast, a mother who emphasize on importance of talking and reading with children may take care to show more emotional responsivity and warmth during parent-child interactions (e.g., Luster et al., 1989). In such a situation, it seems very likely to expect different developmental outcomes for the children of these two mothers. Therefore, investigating parenting beliefs is thought to shed light on understanding parental actions in parent-child interactions and their possible consequences on child outcomes.

With respect to emotional development, previous studies in the literature have mostly focused on parents' beliefs about emotions. These include the parent's beliefs about a particular emotion (e.g., value/acceptability of anger) or the parent's appraisals and attributions of children's emotional experience (e.g., children's capabilities about emotions, stability of emotions, children's intention to use emotions, etc.) (Halberstadt et al., 2013). In this regard, the results suggest that the value of emotions and desired emotions differ across cultures and that parents' beliefs about emotions are shaped by these cultural norms (Markus & Kitayama, 1991; Parker et al., 2012). In line with this, the findings support that since parents are motivated to raise culturally fit children, their beliefs about emotions influence their strategies and responses to children's emotions (Bayram-Özdemir & Cheah, 2013; Trommsdorff & Friedlmeier, 2010).

As a result, the children are expected to learn how to display and regulate their emotions in a culturally organized socialization context in a way that is consistent with cultural values (Eisenberg et al., 1998). Relatedly, in their literature review, Trommsdorff and Rothbaum (2008) compared parents from individualistic and collectivistic cultures in terms of valued

emotions and emotion regulation goals, and reported that parents differed in these aspects in line with their cultural self-orientation. That is, independently oriented parents valued more self-focused emotions such as pride and anger, whereas interdependently oriented parents valued more other-focused emotions such as shame. In addition, parents from collectivist-oriented cultures believed that shame was functional because it mediated culturally desirable behavioral outcomes (e.g., adherence to social norms and expectations), whereas parents from individual-oriented cultures perceived shame as a harmful emotion for children because it conflicted with self-promoting goals (e.g., reducing self-esteem). However, for self-focused emotions such as pride and anger, this relationship was found to be in the opposite direction between the two cultures. Further, parents from collectivist-oriented cultures desire emotional regulation skills in their children that promote adherence to social norms and relationships, while parents from individual-oriented cultures are motivated to develop emotion regulation skills in their children that support individual autonomy and self-enhancement. Consequently, consistent with these value attributions and socialization goals, a large body of research has shown that parents adjust their parenting behaviors in line with parental beliefs about emotion and emotion regulation in order to achieve culturally desirable outcomes in their children (Bayram-Özdemir & Cheah, 2013; Chen et al., 1998; Ziehm et al., 2013).

Parents benefit from emotions not only to accomplish culturally desirable/appropriate child outcomes but also to avoid or reduce culturally undesirable/inappropriate child outcomes. That is, given that emotions function to motivate behavior and regulate interpersonal relationships (Keltner & Haidt, 1999), parents can be expected to use emotions in child rearing to manage their children's wrongdoings and transgressions and thus to achieve desired child outcomes. In this regard, Hoffman (1983) argued that, as an effective discipline strategy, the appropriate level of arousal through emotion induction motivates the child to participate in the moral socialization process and thus enables the child to internalize cultural values (as cited in Fung, 2006, *pp.* 177-178). However, as mentioned before, the functions and meanings of the emotions vary across cultures, especially for self-conscious emotions. Accordingly, previous studies suggest that the values attached to emotions in cultural context guide parents on which emotions can be used in raising children (Fung, 2006; Mascolo et al., 2003). For example, self-focused emotion induction strategies such as praising are less favored by parents from collectivist-oriented cultures because they believe that praise may undermine interdependent self-development (Trommsdorff, 2006). In contrast, these parents tend to use more other focused emotion induction strategies such as shaming because they believe that sense of shame promotes interdependent self-development, whereas shamelessness motivates the child to behave immorally (Fung, 1999). However, these tendencies in inducing emotions are typically

observed in the opposite direction in parents from individual-oriented cultures (Mascolo et al., 2003).

Taken together, theoretical and empirical research on emotion in cultural context support the idea that parenting beliefs about emotion-inducing disciplinary strategies may also influence parenting behaviors in socialization process. Surprisingly, contrary to parental beliefs about emotions, parents' beliefs about emotion-inducing strategies have received little attention in the literature. Furthermore, it is largely unknown how parents' beliefs about emotion-inducing strategies are reflected in their parenting behaviors and thus influence child development. Therefore, this study aimed to provide further insights into emotion socialization in the familial and cultural context by investigating the relationships between parental beliefs, behaviors, and child outcomes. Specifically, parenting beliefs about shaming strategy was examined in relation to negative parenting dimensions and adolescents' maladaptive emotion regulation strategies. Parents' beliefs about shaming in particular were included in the scope of this study for two reasons. First, in the (predominantly western) literature shame is considered a negative emotion and is typically associated with the self, which is one of the central themes of adolescence (Sebastian et al., 2008). On this basis, shame or shaming may hinder optimal development of self-regulation, especially the emotional aspect of it that this study is concerned with. Second, as noted above, the values and meanings attributed to shame vary with cultural self-orientations, and thus parental practices and their impact on child development may differ depending on the value attributed to shame in a given culture (Trommsdorff, 2006; Mascolo et al., 2003). In this regard, Türkiye is described as a cultural context in which individualistic and interdependence orientations can coexist (Göregenli, 1997; Kağıtçıbaşı & Ataca, 2005). Furthermore, intergenerational differences in individualistic-collectivist tendencies between parents and adolescents in Türkiye have been reported, suggesting that adolescents tend to adopt more individualistic orientations (Mayer et al., 2012). In this context, as cross-cultural research findings suggest, cognitive attributions of shame can be expected to vary between parents and their adolescent children. That is, the traditional shaming strategy adopted by parents, possibly with benign intentions, may be perceived by individualist-oriented adolescents as signs of negative parenting and thus associated with maladaptive developmental outcomes. Therefore, examining the pathway proposed in this study will contribute to the literature by providing insights into how younger generations in Türkiye evaluate parenting behaviors of their mothers who endorse more traditional disciplinary strategies and whether such traditional strategies indirectly predict child outcomes.

In order to elaborate the theoretical and conceptual basis of the model proposed in this study, the next section is devoted to parenting beliefs. Firstly, the concept of parenting beliefs will be defined, and cultural influences on child-rearing beliefs will be described. Then, parenting beliefs in Türkiye will be explained in the light of Kağıtçıbaşı's family change model. Finally, the beliefs that parents hold about shaming will be discussed with reference to cultural values regarding self-conscious emotions, followed by a review of the literature on how parental beliefs about shaming may influence their children's emotion regulation.

### **3.1.3. Parenting Beliefs and Culture**

According to Super and Harkness's (1997) developmental niche framework, parenting beliefs are defined as parents' implicit views and representations that include their attitudes, goals and values about children and childrearing more broadly. Specifically, child-rearing beliefs include parents' informal theories or views about how successful parenting should be (Okagaki & Bingham, 2005). In this sense, the perceptions about the role and responsibilities of the parents, the expectations from the parents and children and the principles or strategies that adopted by parents with respect to the caregiving or socialization process constitutes these parenting beliefs (Goodnow & Collins, 1990; McGillicuddy-Delisi & Sigel, 1995). However, child-rearing beliefs cannot be separated from the cultural context because the definition of ideal parenting and how it should be practiced is shaped by the needs, requirements and values of the society in which one lives. That is, parenting beliefs are influenced by cultural values that guide individuals about what is considered appropriate/desirable and inappropriate/undesirable in a given society (Bornstein & Cheah, 2006). For example, Chen and colleagues (1998) revealed that behavioral inhibition of the child was interpreted differently between Chinese and Canadian mothers, and that mothers' socialization beliefs changed accordingly. Namely, Canadian mothers adopted more restrictive socialization beliefs (e.g., rejection and punishment attitudes) for behavioral inhibition, since it is not accepted in individualistic cultures, whereas Chinese mothers displayed more accepting beliefs (e.g., warmth and accepting attitudes) for behavioral inhibition, which is in line with the values of a collectivist culture. Similarly, in support with individualistic-collectivist orientations, Chao (1995) found that the European American mothers considered teaching children to gain emotional awareness especially in case of conflict as important, whereas Chinese mothers attached more importance to achievements aimed at maintaining social harmony in child-rearing. Taken together, it can be concluded that parents believe that the acquisition of culturally congruent behaviors is part of successful development. Therefore, they usually try to promote child's social and emotional development by demonstrating culturally appropriate child-rearing ideologies (Ziehm et al., 2013).

On the other hand, culture does not only provide parents with guidance as to what is considered appropriate/desirable for a child and what is not. Also, culture affect parents' cognitions about the strategies through which a particular socialization goal can be achieved. In this regard, as an important component of the child's developmental niche, child-rearing customs are influenced by cultural context, and thus provide parents with a framework for culturally regulated parental disciplinary practices in child rearing (Super & Harkness, 1997). In other words, culture directs parents to use parental discipline or management strategies that are consistent with socialization goals and associated with desired developmental outcomes in the community (Bayram-Özdemir & Cheah, 2013; Fung & Lau, 2009). For example, Ziehm and colleagues (2013) found that German mothers prefer to use reactive maternal sensitivity rather than proactive maternal sensitivity because they believe that it supports their children's autonomy development. In line with this viewpoint, it can be expected that some discipline or management strategies (e.g., training and shaming) would be perceived more positively by parents in certain cultures and would therefore be more prevalent in those cultures (Lieber et al., 2006). However, in order to understand how these strategies are reflected in parenting practices and how they influence the child's developmental outcomes in the socialization process, it is first necessary to understand the parenting cognitions of that culture, as suggested by cognitive anthropologists, Harkness and Super. (2006). Therefore, the next section will elaborate further parenting beliefs in Türkiye.

### **3.1.3.1. Parenting Beliefs in Türkiye**

In the Family Change Theory, Kağıtçıbaşı (2002) argued that there are different family models in the community with respect to the values attributed to children and the expectations of parents from their children. Accordingly, Kağıtçıbaşı (2007) identified three family models, which differ in terms of socioeconomic demographics, family structure as well as parenting cognitions and socialization practices. Because these family models are important for understanding parental beliefs in Türkiye, they were briefly mentioned below.

The first family model is called “the family model of *total interdependence*”, in which family members are both emotionally and materially interdependent with each other and with other relatives. In this sense, the interdependence between family members serves the continuity of the family across generations. In this family model, the children are expected to be strongly attached to their parents and to take care of the elderly parents when the time comes. That's why, in the socialization process, attitudes and behaviors that emphasize obedience to elders are encouraged, while attitudes and behaviors involving individualism and autonomy are punished. This family model is seen as the typical family model of traditional and rural societies.

The second model is called “the family model of *independence*”, in which independence of family members from other members and relatives are highly valued. In this model, parents are expected to invest in the child both emotionally and financially. On the other hand, children are expected to grow up as self-confident and autonomous adults. To this end, parents are motivated to avoid controlling and authoritarian disciplinary strategies that may undermine the child's autonomy. This model is seen as the typical family model of urbanized, industrialized and mostly western middle-class societies.

Kağıtçıbaşı (2007) argued that with socioeconomic development, there would be a shift in family models from the interdependence to the independent family model, but that this process would somehow be influenced by the continuity of culture and give rise to a third family model, which is “*emotional/psychological interdependence*”. In this model, family members are expected to achieve financial independence while remaining emotionally and psychologically connected. Thus, maintaining the child's psychological commitment to the family is emphasized in the socialization goals of parents. To this end, parents are still motivated to use parental control behaviors. However, since individualism and autonomy of the child are also functional in such a society, parents try to adjust these behaviors by combining them with an autonomy orientation (Kağıtçıbaşı, 2002).

With respect to family models and thereby parenting beliefs, Kağıtçıbaşı and Ataca (2005) found dramatic changes in child-rearing values in Türkiye between 1975 and 2003. Namely, the mothers reported having less material or utilitarian expectations from their children in 2003 compared to 1975. On the other hand, they attributed more psychologically oriented values to child rearing in 2003. In addition, independence and self-reliance, along with obedience, emerged as desirable qualities in a child for mothers in 2003. Although they found within culture differences in the degree of individualistic/collectivist orientations depending on socioeconomic status, urban/rural residency and generation, their results suggest in overall that parents desire autonomy along with relatedness for their children. Supporting this study, other studies also provide evidence of coexistence of collectivist (e.g., respect for parents and commitment to family) and individualistic (e.g., self-reliance and autonomy) parenting beliefs among parents in Türkiye (Kağıtçıbaşı & Ataca, 2005; Mayer et al., 2012; Yağmurlu et al., 2009) and those from Turkish background (Citlak et al., 2008; Durgel & Yağmurlu, 2014). Based on these findings, Kağıtçıbaşı (2007) indicated that the typical family model in Türkiye is largely consistent with the family model of *emotional/psychological interdependence*, in which parents value both parental control and autonomy support together.

Taken together, the aforementioned changes in parenting values in Türkiye over the years is likely to have altered parents' beliefs about disciplinary strategies. There are several physical (e.g., power assertion) or psychological (e.g., induction, love withdrawal) parental discipline strategies to manage inappropriate behaviors of children (Hoffman & Saltzstein, 1967). Research suggests that the physical discipline strategies such as corporal punishment were more likely perceived by parents in collectivist rural areas as a legitimate and effective strategy to discipline disobedient or disrespectful children (Buldukoğlu & Kukulü, 2007). Indeed, Sunar and Fişek (2005) reported that disciplinary strategies such as corporal punishment and shame induction were commonly used by traditional Turkish families. However, recent studies have shown that physical strategies such as corporal punishment are not preferred as the primary strategy by mothers in Türkiye, suggesting that positive parenting beliefs about physical discipline tend to change with socioeconomic changes in Türkiye (Kırcaali-Iftar, 2005). In contrast, empirical evidence showed that parents in Türkiye continue to use psychological parental discipline strategies such as guilt induction and shaming more than their European American and Korean counterparts (Cho et al., 2021). In line with this, Sümer and Kağıtçıbaşı (2010) indicated that in the family model of *emotional/psychological interdependence*, the parents are motivated to use psychologically controlling strategies in order to strengthen children's psychological dependence on the family. Therefore, some parents in Türkiye may be expected to have more positive child-rearing beliefs regarding collectivist, emotion inductive discipline strategies. Among these strategies, examining the impact of parents' beliefs about shaming on adolescents is particularly meaningful because of the reported negative effects of shame and shaming on self (Barber & Halmon, 2002; Helwig et al., 2014) and emotional aspect of self-regulation (Matos et al., 2013; Szentagotai-Táatar & Miu, 2016), which are prominent themes of adolescence. Thus, parenting beliefs regarding shaming were explained in detail in the next section.

### **3.1.3.2. Parenting Beliefs about Shaming**

As mentioned earlier, parents pursue the goal of raising culturally competent adults of their society, and thus they construct their parenting beliefs in accordance with cultural values (Bornstein, 2012). In this regard, as a motivator of one's behavior and also regulators of interpersonal relationships, emotions play an important role in socialization process for internalization of social rules, norms and displays defined within the culture (Keltner & Haidt, 1999). Self-conscious emotions such as guilt, empathy and shame are especially emphasized in terms of moral socialization because these emotions are thought to motivate individuals to be sensitive for social cues and to adjust their behaviors accordingly in order to avoid undesirable social outcomes (Lieber et al., 2006; Markus & Kitayama, 1991). In this regard,

induction of these emotions is used by parents as a psychological discipline strategy to manage undesirable child behavior and hence raise a child with moral values (Barber 1996; Fung & Chen, 2001). However, studies suggest that there are cultural differences in emotional component used in the context of moral socialization. That is, in individualistic cultures, instilling a sense of empathy or guilt in order to avoid harming others and to promote prosocial behavior seen as the basis of moral training, whereas in collectivist cultures the instilling sense of shame is thought to serve a similar function (Fung, 2006). Here, explaining the relationship between guilt and shame with the self seems useful to understand culturally regulated positive beliefs about shame and why some parents prefer especially shaming strategy in the moral socialization process.

In the literature, it is accepted that self-conscious emotions emerge as a result of some evaluation process of the self. Relatedly, Higgins (1987) argued that guilt and shame both arise as a result of the comparison of the actual self (i.e., the self, people believe they are) with other selves, but standpoint or agency of the self being compared differs for these two emotions. That is, according to *self-discrepancy theory* (Higgins, 1987), shame is an emotion that occurs when actual self does not match others ideal self (i.e., the self, desired by others). Specifically, the theory suggests that individuals experience shame when they think that their actual performance does not meet the expectations of the significant other and therefore the significant other will be dissatisfied with them. Consequently, shame is thought to be associated with anxiety about losing the love or respect of others, and motivate the individuals to behave accordingly. In contrast, guilt is an emotion that arises when people's actual selves are incompatible with their own ought selves (i.e., the self, defined by personal standards). In particular, individuals feel guilty when their actual performance violates personally legitimate moral norms. As a result, guilt is believed to motivate individuals to behave morally in order to gain their own self-esteem. From this perspective, guilt induction can be expected to serve individual-oriented socialization goals, while shaming can be expected to serve specifically interdependence-oriented socialization goals in moral socialization. This seems also consistent with existing findings that the meaning and experience of self-conscious emotions varies depending on how the self is perceived in relation to others (Markus & Kitayama, 1991; Wallbott & Scherer, 1995). Along with this reasoning, considering the research suggesting that the self is a cultural construct (Kağıtçıbaşı, 2002), it seems reasonable to expect cultural differences in terms of child-rearing beliefs about shaming depending on how the self is defined in that culture.

In fact, in cultures where the autonomous self is valued, shame is considered a threat to self-esteem and therefore parents try to avoid shaming disciplinary strategies to raise self-reliant



children. Conversely, in cultures where the relational self is valued, shame is considered a mediator of social cohesion and moral conduct, and so the parents are motivated to use shaming strategies to promote development of interdependent self in their children (Mascolo et al., 2003). In this regard, unlike those in individualistic cultures, parents in collectivistic cultures seem more likely to use shaming strategies with the intention of instilling moral values in their children, teaching them to take responsibility for their behaviors and emphasizing the importance of social feedback without displaying an aggressive attitude towards their children (Fung, 1999; Wu et al., 2002). Possibly for this reason, studies suggest that, unlike what is found in western cultures, shaming in eastern cultures is not necessarily associated with negative developmental outcomes (Cheah et al., 2019; Fung & Lau, 2012).

When the results of cross-cultural studies are evaluated together, it can be concluded that shaming as a psychological discipline strategy is perceived negatively in independent family models and positively in interdependence models, in line with parents' socialization goals. However, little is known about parenting beliefs about shaming in cultures such as Türkiye, where psychologically interdependent family models are typical. Sümer and Kağıtçıbaşı (2010) argue that parents in Türkiye desire a certain degree of autonomy for their children while at the same time expecting them to remain emotionally connected to the family. In this context, it can be assumed that the use of psychological control strategies similar to shaming is largely perceived as adaptive by families in Türkiye in terms of teaching moral values such as respect for elders and thus promoting interdependence. Indeed, for a child living in Türkiye, it is not uncommon to hear the phrase "what a shame" when a child exhibits a behavior that is not in line with the child's age (e.g., "what a shame, you are a big sister now!"), social context (e.g., "what a shame, people will laugh at you now for behaving like this!") or parental expectations (e.g., "What a shame, this behavior is unbecoming of you!). Moreover, empirical evidence seems to support this view, showing that even urban, middle-class parents in Türkiye resort to emotion focused discipline strategies like shaming in childrearing (Cho et al., 2021; Sunar, 2010). Together, parents in psychologically interdependent cultures may be expected to believe in the functionality of shaming strategy in child rearing to teach the child moral values and raise a child with culturally desirable outcomes.

Importantly, recent researchers in the social sciences agree that classifying cultures based on the individualism/collectivism dichotomy provides an inadequate picture of family dynamics because such a division disregard intra-cultural difference (Greenfield et al., 2003). That is, even though culture guide the parents in terms of culturally regulated child rearing ideologies and parenting practices, the parenting strategies are also influenced by other psychosocial factors (e.g., socioeconomic status, value orientations or self-construal) (Kağıtçıbaşı, 2007;

Ziehm et al., 2013). Therefore, individuals in the same culture are expected to differ in the extent to which they have internalized and thus endorsed individualistic/collectivistic cultural values (Oyserman et al., 2002). From this perspective, it is likely to observe within-cultural variations in parenting beliefs regarding the use of shaming as a parenting strategy. Namely, shaming can be perceived by some parents as a more positive and effective strategy to correct the child's negative behavior and to teach the child collectivist values such as self-discipline and compliance with social rules (Lieber et al., 2006). In this context, examining shaming beliefs in cultures like Türkiye, where parents try to synthesize both individualist and collectivist values, is important to see the effects of these traditional strategies on developing children. In relation to emotional development, it can be argued that shaming beliefs may influence parental behaviors in the context of emotion socialization and thus play an important role in the development of emotion regulation. On this basis, the conceptual framework between parents' beliefs about shaming and children's emotional development will be explained in the next section.

### **3.1.3.3. The Role of Shaming Beliefs in Emotion Regulation**

According to developmental niche theory (Harkness & Super, 2006), parenting beliefs influence social, cognitive and emotional aspects of development by shaping the physical and social environments of the children. In particular, the beliefs that parents hold about emotions and emotion-inducing strategies like shaming may be specifically crucial for emotional development of the growing children. In support of this view, previous research has shown that emotion-related beliefs and values are predictive for parents' emotion socialization strategies (Cole et al., 2006; Dunsmore & Kan, 2001; Halberstadt et al., 2013). That is, the parents are motivated to use strategies aligned with their beliefs to manage children's unwanted emotions and behaviors (Lieber et al., 2006). For example, studies have found that anger is less accepted emotion in interdependent cultures because angry people have the potential to threaten collectivist values such as social cohesion and obedience. In contrast, shame is seen as more valuable in these cultures because it promotes collectivist values such as remorse for one's immoral behavior or humility (Fung, 1999; Markus & Kitayama, 1991). In this context, a child's feeling a reasonable level of shame is seen as harmless and even necessary for development of interdependent self and the acquisition of culturally valued traits in interdependent cultures (Fung, 1999; Fung & Chen, 2001). On the other hand, in individualistic cultures, anger is seen as functional to some extent for the development and protection of the autonomous self, whereas shame is interpreted as an obstacle to the development of the autonomous self and the acquisition of culturally valued traits such as self-reliance (Cole et al., 2006; Markus & Kitayama, 1991). Taken together, it can be said that

unlike independence-oriented parents who try to protect the child from feeling of shame, shame induction is regarded as a benign and effective disciplinary strategy by parents who value interdependence to deal with their children's negative emotions, and promote social behaviors (Mascolo et al., 2003).

In this context of emotion socialization, culture and parental beliefs can be regarded as a guideline for the growing members of the society not only about which emotion should be regulated but also how it should be regulated. As noted above, shaming is likely used by caregivers as an external emotion regulation strategy to reduce children's negative emotions or immoral behaviors (Fung, 1999). However, the critical question here, which also constitutes the main purpose of the present study, is how parental shaming beliefs, an external emotion regulation strategy, is reflected on children's internal emotion regulation strategies. Surprisingly, parental shaming has been little studied at the cognitive level in the literature. Nevertheless, previous findings supporting associations between parents' beliefs about emotions and children's emotional outcomes seem promising for the link between beliefs about parental shaming and their children's emotion regulation skills. That is, the theoretical standpoint of this pathway is based on the premise that values related to emotions and interpersonal relationships determine the norms related to emotion regulation (Matsumoto et al., 2008). Accordingly, it can be argued that the parent's beliefs about shaming likely to provide insight into the emotion regulation strategies that are culturally expected from the child. Namely, parents who endorse the use of shaming in child rearing typically believe that shaming will help their children to learn the importance of taking responsibility for their actions, maintaining social cohesion, and internalization of rules (Fung et al., 2003; Mascolo et al., 2003). It is noteworthy that these characteristics that parents want to see in their children require behavioral emotion regulation skills or at least competence in expressive suppression of emotions. In other words, because it prevents negative outcomes such as hurting interpersonal relationships or disrupting social cohesion, emotional suppression is considered the optimal emotion regulation strategy in cultures where interdependence is valued (Matsumoto et al., 2008). Supporting this view, a growing number of studies showed that suppressing behavioral expression of emotions was more common and positively correlated with adaptive emotion regulation such as cognitive reappraisal in interdependent cultures (Matsumoto et al., 2008; Voswinckel et al., 2019). Therefore, it can be argued that parents' beliefs and behaviors regarding shaming may serve to internalize culturally valued forms of emotion regulation such as expressive suppression.

Similar to behavioral emotion regulation, the cognitive way of regulating emotions is also likely to be influenced by parents' beliefs regarding shaming. Namely, Darling and Steinberg

(1993) suggest that parents bring their own cognitions to their parenting style, which creates an emotional climate in the socialization context in which parent and child interact. Relatedly, Grych and Fincham (1990), in their cognitive-contextual framework, argue that emotional climate in the parent-child interactions plays an important role in how children perceive and evaluate stressful events (e.g., interparental conflict) and thus influences the ways in which children cope with these events. From this viewpoint, parental adherence to shaming strategy may prevent an optimal context for emotion socialization between parent and child and thus lead up to maladaptive cognitive emotion regulation strategies. To the best of our knowledge, this proposed pathway has not been empirically tested so far, but two findings consistently reported in the literature provide a conceptual basis for this relationship. Firstly, studies showed that parenting beliefs play an active role in children's emotional regulation by shaping the child's emotional socialization context (e.g., Keller & Otto, 2009; Morris et al., 2007). Secondly, research findings suggest that shame and shame-proneness is positively associated with maladaptive cognitive regulation strategies (e.g., Cheung et al., 2004; Matos et al., 2013; Orth et al., 2006; Szentagotai-Tătar & Miu, 2016). On this basis, the current study firstly aims to contribute to the understanding of the link between parental beliefs and child outcomes by examining the role of parental beliefs about shaming in adolescents' maladaptive cognitive emotion regulation strategies.

According to developmental niche framework, parental beliefs influence the child outcomes through parenting practices (Super & Harkness, 1997). In this sense, parents' beliefs about child-rearing are seen as a motivating force for their actions during the parent-child interactions. Therefore, the next section will focus on parental behaviors that are expected to be associated with parents' shaming beliefs to fully understand the mediation pathway of the relationship between parental beliefs and developmental child outcomes. First, parental rejection and psychological control as indicators of negative parenting will be conceptually defined and the theoretical perspective on why such parenting behaviors hinder child development will be presented. Then, the rationale behind the relationship between negative parenting and children's emotion regulation development will be elaborated based on the existing literature. Finally, the framework of how parenting beliefs may be related to negative parenting behaviors in the context of emotional socialization will be explained.

#### **3.1.4. Parenting Behaviors**

Parenting behaviors refer to parents' child-rearing actions and strategies used to socialize their children. These behaviors can be categorized into two dimensions, positive and negative, depending on the outcomes associated with child development (Cheung & Theule, 2019).

That is, the positive dimension of parenting is characterized by parental behaviors that promote warmth, induction/monitoring and autonomy and is associated with higher socio-emotional functioning of children. In contrast, the negative dimension of parenting is characterized by rejecting, coercive and chaotic/inconsistent parental behaviors, and usually predict maladaptive emotional outcomes in children and adolescence (Goagoses et al., 2023; Skinner et al., 2005). Since shaming and maladaptive emotion regulation skills are mostly associated with negative parenting dimensions in the literature (e.g., Matos et al., 2013; Rueth et al., 2017; Sarıtaş et al., 2013; Smetana et al., 2021), two negative parenting behaviors in particular, rejection and psychological control, were included in the current study. In fact, parental rejection and psychological control were known as autonomy-restrictive parenting behaviors (Rowe et al., 2015). Considering the importance of autonomy development in adolescence (Zimmer-Gembeck & Collins, 2003), it is expected that these two parenting behaviors would interfere with optimal developmental outcomes, especially during adolescence. In this section the theoretical background of parental rejection and psychological control will be explained first. Then, previous studies on these negative parenting behaviors will be reviewed in relation to parenting beliefs and children's emotion regulation skills, respectively.

#### **3.1.4.1. Rejection**

Parental rejection is defined as the absence or withdrawal of positive parental responses to the child, such as warmth, affection, support, and concern (Rohner, 1986). In this regard, children can feel rejected by their parents, especially when parents show critical or negative emotional reactions in response to the child's help- or support-seeking behaviors (Rowe et al., 2015). In the child-rearing context, rejecting parenting may be practiced through cold/unaffectionate (i.e., lack of warmth), hostile/aggressive, undifferentiated rejecting and neglectful parenting behaviors (Rohner et al., 2012). Specifically, *coldness/lack of affection* refers to the absence of verbal (e.g., praise or compliments) and physical (e.g., hugs, kisses, or cuddles) displays of affection by the parent towards the child. *Hostility/aggression* refers to physical (e.g., kick, hit or scratch) and verbal (e.g., sarcasm, belittling or curse) aggressive actions of the parent towards the child. *Neglect* refers to parent's ignoring the child's physical and psychological needs and not paying attention to the child. Finally, *undifferentiated rejection* refers to the child's feeling that they are not loved and valued by the parent.

According to parental acceptance rejection theory (Rohner, 1986), positive responses such as love, concern, support and care shown by an attachment figure (in the case of children, mostly their parents) are a universal, emotional need common to all humans.

In this sense, parental rejection means that this basic need of the child to be loved and accepted is not met by the parent and is therefore associated with the emergence of various emotional and behavioral problems in the child (Rohner & Brothers, 1999). In support of this view, numerous empirical studies have showed that parental rejection positively predicted internalizing and externalizing problems and emotion regulation difficulties in children and adolescence (Hale et al., 2005; Di Giunta et al., 2022; Rowe et al., 2015; Saritaş et al., 2013).

#### **3.1.4.2. Psychological Control**

Parental psychological control is defined as parents' intrusive and manipulative behaviors aimed at controlling the child's inner world such as thoughts, feelings and emotions (Barber & Harmon, 2002). In order to ensure that the child conforms to parental expectations and values, psychologically controlling parents usually intervene in children's psychological and emotional processes through various parenting practices, such as guilt-induction/shaming, conditional love/love withdrawal, instilling anxiety and invalidating child's opinions and feelings (Barber, 1996; Barber & Harmon, 2002). To illustrate, a mother with high psychological control may try to prevent her child from violating social or moral rules by withdrawing her love in response to child's transgression. In this regard, Becker (1964) argued that psychological control is a subtle, intrinsic and negative form of parental disciplinary strategies (as cited in Barber, 1996, *p.* 3297).

In the literature, parental psychological control has been associated with a wide range of psychological problems in children and adolescence. In this respect, some researchers have attempted to explain how psychological control hinder optimal developmental child outcomes on the basis of self-determination theory (Soenens & Vansteenkiste, 2010). That is, the self-determination theory (Deci & Ryan, 2000) argues that satisfaction of three innate psychological needs (i.e., autonomy, relatedness, and competence) is essential for psychological growth and the optimal development of the individual. Accordingly, the first of these basic needs is *autonomy*, which refers to the desire to choose freely one's own experiences and be volitional; the second is *relatedness*, which refers to the desire to maintain a connection with others, to care others and to be cared by others; and the last is *competence*, which refers to the desire to feel competent in one's actions. Relatedly, psychologically controlling parents aim to impose their wishes and expectations on the child using manipulative methods through parent-child bonding, affect induction, and criticism (Barber, 1994). For this reason, researchers suggest that parental psychological control would conflict with three basic needs and thus predispose children or adolescents to develop various socio-emotional problems (Soenens & Vansteenkiste, 2010).

That is, the child's need for competence is likely frustrated by parenting tactics such as guilt induction and shaming, which indicate that the child's performance falls below the parent's standards (Soenens & Vansteenkiste, 2010). Similarly, psychologically controlling behavior of parents is likely to push children to behave in a certain way, not of their own volition, but at request of their parents. In such a situation, for example, even if the parent encourages the child's autonomy, this will not serve to fulfill the need for autonomy because it will be done in a controlling manner that ignores the child's wishes and desires (Soenens et al., 2009). Therefore, it can be said that regardless of parent's intention, parental psychological control will be insufficient to meet the child's developmental and emotional needs, leading to psychological dysfunction in children and adolescence. Numerous studies supporting this view have provided empirical evidence that parental psychological parenting is associated with a wide range of psychological problems, including internalizing and externalizing problems (e.g., Gorostiaga et al., 2019; Lansford et al., 2014; Symeou & Georgiou, 2017), and emotional dysregulation (e.g., Beliveau et al., 2023; Lin et al., 2023), especially in adolescence.

Taken together, the two well-established theories suggest that both parental rejection and psychological control interfere with the fulfillment of some universal socio-emotional needs and thus impede healthy psychological development in growing children. Since parental rejection and psychological control, by definition, set the phase for a negative emotional climate between parent and child during the socialization process, it can be expected that these negative parenting behaviors are most related to emotional development, especially emotion regulation (Goagoses et al., 2023). Further, several studies have shown that rejecting and psychologically controlling parental behaviors predicted adverse child outcomes through maladaptive emotion regulation (Di Giunta et al., 2022; Beliveau et al., 2023; Kallay & Cheie, 2023). Therefore, it seems important to understand how negative parenting behaviors and specific emotion regulation strategies are related in order to enhance optimal developmental outcomes in adolescence. To this end, the current study examined parental rejection and psychological control as possible risk factors for maladaptive emotion regulation strategies in different developmental phases of adolescence. The conceptual framework for the relationship between these negative parenting behaviors and emotion regulation development was explained in the next section.

#### **3.1.4.3. The Role of Negative Parenting in Emotion Regulation**

Parenting behaviors shape the children's emotion socialization context in several ways. Specifically, Eisenberg and colleagues (1998) suggest that how parents react to their children's

emotions, how they converse with their children about emotions and how they manage their own emotions play a critical role in children's emotion regulation development from infancy to adulthood. In this context, previous studies have shown that negative parenting practices such as rejecting and psychologically controlling parenting negatively influence these socialization mechanisms and therefore hinder optimal emotional development (Morris et al., 2007; Morris et al., 2017). In general sense, such parenting behaviors can be expected to create a negative emotional climate in socialization context of the children, and children can be expected to adopt cognitive emotion regulation strategies accordingly. For example, parental acceptance-rejection theory hypothesizes that parental rejection will create an emotionally unsafe environment for children (e.g., emotionally unresponsive and unstable), thus leading to the development of a negative perception of the world. Specifically, the theory suggests that rejected children will likely perceive themselves as more negative and their experiences or relationships as more threatening or hostile (Rohner et al., 2012). From this theoretical standpoint, the children with rejecting parents can be expected to use more maladaptive cognitive emotion regulation strategies such as catastrophizing, self-blame and rumination. As an empirical support for this view, Quirk and colleagues (2015) have found that maternal rejection positively predicts rumination in late adolescence through development of self-focused maladaptive cognitions. Similarly, Saritaş and colleagues (2013) have revealed that middle adolescents who experienced maternal rejection had difficulties in emotion regulation that include also some cognitive aspects (e.g., lack of emotional awareness, difficulties in impulse control and concentration).

In a similar line of reasoning, parental psychological control is also expected to relate with greater use of maladaptive cognitive regulation strategies. Namely, psychologically controlling parents typically use a variety of strategies to encourage the child's internalization of parental expectations and standards, such as placing the blame on the child, threatening to withdraw love from the child, or inducing feelings of guilt (Barber, 1996). Such a socialization context may promote children to ruminatively evaluate their actions to avoid parental psychological punishment, and to place the blame on themselves when they judge that their performance does not meet parental standards. Although parental psychological control, specifically in relation to cognitive maladaptive strategies, has been relatively understudied in the literature, a few empirical evidences have supported this relationship for rumination (Akkaya, 2017) and self-blame (Selçuk et al., 2020) strategies in (pre-)adolescents.

Furthermore, the pathway from negative parenting to maladaptive cognition and emotion regulation suggested by the theoretical standpoints of rejecting and psychologically controlling parenting seems to be in line with the promise of the contextual-cognitive



framework. That is, the contextual-cognitive framework suggests that children's cognitive appraisals of stressful events such as marital conflict, and hence how they manage such situations, are significantly influenced by the emotional climate of their socialization context (Grych & Fincham, 1990). For example, Selçuk and colleagues (2020) have found that pre-adolescent children with psychologically controlling parents reported higher self-blame in response to inter-parental conflict. Accordingly, such negative parenting experiences can be expected to increase the emotional burden of the stressful event, but reduce the child's cognitive resources to cope. Therefore, children are likely to adopt maladaptive cognitive strategies that appear less cognitively demanding. Supporting this view, Luebke and Bell (2014) have found that negative emotional climate, characterized by high maternal psychological control and negative emotional expression, predicts higher negative affect in adolescents and subsequent higher depression and anxiety, which are closely related to maladaptive emotion regulation strategies. Furthermore, another study using brain imagery techniques reported similar findings for adolescents. That is, as a marker of rejecting and psychologically controlling parenting, maternal criticism resulted in increased activity in affective networks in the adolescent brain, indicating emotional reactivity, but decreased activity in cognitive control networks, which are responsible for the cognitive control of emotions (Lee et al., 2015). Moreover, the direct relationship between rejecting and controlling parenting and maladaptive cognitive emotion regulation has been tested in a recent study. Accordingly, Kallay and Cheie (2023) revealed that these parenting behaviors predicted higher use of maladaptive cognitive strategies in adolescents. Taken together, the theoretical perspectives and the small number of empirical findings appear to provide a strong foundation for the relationship between negative parenting and children's maladaptive cognitive emotion regulation and promising for future research. On this basis, the current study examined parental rejection and psychological control as possible risk factors for maladaptive cognitive emotion regulation strategies in different phases of adolescence.

Given the detrimental effects of this type of parenting on children's emotion regulation development (Goagoses et al., 2023), the next question to be answered is why some parents have rejecting and controlling responses to their children's emotions and behaviors. Answering this question is important for identifying risk groups in terms of maladaptive emotion regulation and related problem behaviors, especially during adolescence and then preparing intervention programs for this target group. As mentioned before, the beliefs that parents hold about emotions and emotion inducing strategies motivate parenting behaviors in the context of emotion socialization. Accordingly, parenting beliefs about shaming strategy may be a possible risk factor for negative parenting in non-clinical samples, which was discussed in the following section.

#### **3.1.4.4. The Role of Parenting Beliefs in Negative Parenting**

As detailed in the previous sections, parenting beliefs and behaviors form a bridge for the transmission of cultural values to the child. Specifically, parenting beliefs provide parents with a framework for how to raise their children to have culturally desirable characteristics and optimal developmental outcomes (Harkness & Super, 2006). In this respect, culturally regulated parents' views on the ideal child and child rearing are thought to be a motivational force in determining parenting strategies and actions during the socialization process (Darling & Steinberg, 1993). In fact, parenting beliefs are largely shared among the members of a given culture, and the relevant parenting practices are considered as right way to care in that culture (Bornstein, 2012; Harkness & Super, 2006). However, as cultures differ in parental beliefs about socialization goals and desired child outcomes, there is also variability in cognitions and practices related to parenting behaviors (Mascolo et al., 2003). Accordingly, a parenting behavior that is negatively attributed in one culture may be perceived as more normative and therefore more positive in another culture if it serves the continuity of cultural values (Sümer & Kağıtçıbaşı, 2010). In this context, studies suggest that negatively attributed parenting strategies are perceived positively by parents in some cultures because they are compatible with their socialization goals, and that children raised in these cultures are less negatively affected by these parenting practices (Fung & Lau; 2012; Scharf & Goldner, 2018).

From this perspective, the relationship between culturally organized parenting beliefs and negative parenting behaviors may seem theoretically contradictory at first glance. However, previous research has shown that cultural values are not internalized to the same degree by community members (Oyserman et al., 2002). That is, research suggests that in countries where some form of cultural change is taking place, both individualistic and collectivistic values can be observed together, and that there may be intergenerational differences in individualistic and collectivistic orientations (Göregenli, 1997; Kağıtçıbaşı & Ataca, 2005). For example, Mayer and colleagues (2012) found that adolescents in Türkiye favor the independent family model more than the dependent family model, while their mothers prefer the dependent family model over the independent family model. Based on this result, it can be expected that parents' collectivist values in Türkiye are not accepted by their adolescent children with individualistic orientations. In other words, although parents with collectivist values in child rearing respond to their children with harmless intentions and positive outcome expectations in line with their socialization goals, their behaviors may be perceived as negative parenting by their high autonomy-oriented children. Previous studies showing that a significant number of parents in Türkiye resort to shaming to discipline their children (Cho et al., 2021; Sunar, 2010) support that positive beliefs about shaming continue to be observed in

Turkish culture. However, little is known about how such traditional child-rearing strategies are perceived by adolescents in Türkiye, where younger generations likely endorse individualistic values more. Taken together, when parents with positive beliefs about shaming in childrearing reflect these beliefs in their behavior, they may be perceived by their children as rejecting and psychologically controlling, as in individual-oriented cultures. As a result, shaming beliefs may have detrimental impact on child development through perceived negative parenting. Namely, empirically testing this mediating pathway constitutes the second aim of this study.

Findings in the literature imply that several moderating variables also play a significant role in this proposed mediation model, which is why these moderating variables were elaborated in the next section.

### **3.1.5. Moderator Role of Developmental Phase and Gender**

In the first part of this thesis, Study 1 revealed that maladaptive cognitive emotion regulation strategies in particular are used more by older adolescents and girls. This finding, which is largely consistent with previous studies, suggests the possibility that adolescents may be differentially affected by the risk factors examined, depending on developmental phase and gender. Indeed, there is considerable evidence in the literature that both parents' socialization strategies and children's perceptions of these strategies may change with age. With respect to shaming, Fung (2006) reported that although parents in Chinese culture believe that shaming is an effective strategy for teaching moral values, they often stop shaming publicly when their children reach adolescence. On the other hand, Smetana and colleagues (2021) compared pre-adolescent and adolescent children in terms of how they perceived parental shaming and found that the older group evaluated shaming in more negative ways (e.g., indicative of lower maternal love and care). Similarly, Helwig et al. (2014) showed that early adolescents were more likely than pre-adolescents to believe that parental shaming is a negative parental discipline strategy and damaging to their psychological functioning. In addition, since shaming is conceptually associated with autonomy restriction in the literature, researchers suggest that parental shaming may have a more detrimental impact on children's development as the need for autonomy support increases throughout adolescence (Soenens & Vansteenkiste, 2010).

Taken together, these findings can be interpreted as parents using the shaming strategy less as their children get older, but when they do so, it is perceived more negatively by their children and negatively affects the child's development as the child gets older. However, previous studies on parental beliefs about shaming have involved parents with young children

rather than adolescents (e.g., Fung et al., 2003; Lieber et al., 2006). Thus, it is largely unknown how shaming beliefs in childrearing affect adolescent children's development. To the best of my knowledge, only two studies have examined the relationship between parenting beliefs and children's psychological functioning among school-aged children. First, Fung et al. (2009) found that parents' shaming beliefs were associated with lower levels of parent-reported externalizing problems in school-aged sample. However, regarding child-reported data, parents' shaming beliefs appear to have an exacerbating effect on emotional problems. Accordingly, verbal discipline predicted more internalizing and externalizing problems only for those whose parents held positive beliefs about shaming. Second, Koç Arık (2021) showed that pre-adolescent and adolescent children who have mothers with positive shaming beliefs perceived their mothers' parenting less positively but not more negatively. Also, maternal shaming beliefs were not found to be related to children's internalization of rules. Although age ranges (7-18 years old) were wide in these studies the moderating role of developmental period was not taken into account in any of them. However, given the aforementioned findings on parental shaming, shaming beliefs in child rearing may influence children from diverse age groups in different ways. Therefore, the current study included developmental phase as a possible moderator in the proposed mediation model for maladaptive emotion regulation.

Aside from the developmental phase, several studies indicate that effectiveness of specific parenting behaviors on emotion regulation may also vary depending on the gender of the child (Morris et al., 2007). Indeed, gender-specific child rearing practices on emotional socialization have been mentioned by a great number of studies in the literature (Root & Denham, 2010). Accordingly, research suggests that parents have different expectations of boys and girls in terms of emotion regulation and that experiencing and expressing certain emotions is seen as more appropriate for a particular gender. As a result, studies suggest that parents adjust their parenting in line with gender-specific expectations. For example, some studies have shown that girls feel more rejected by their parents when they express anger, while boys feel more rejected when they express sadness (Eisenberg et al., 1998). According to these results, it can be expected that girls and boys will experience negative parenting at different levels. However, empirical evidence in the literature has yielded mixed results on this issue. For example, Endendijk and colleagues (2016) found in their meta-analytic review that there were no significant gender differences in observed controlling behaviors of parents. In contrast, Ortega et al. (2023) showed that boys in early adolescence perceived more rejection and criticism from their parents than girls. Also, Shek (2008) replicated similar results for psychological control with a large sample of early adolescents in China.

Given these significant gender differences in perceived parenting practices, it seems possible that girls and boys may be affected differently by similar parental factors. However, previous findings revealed inconsistent results for this issue, as well. That is, in parallel with gender differences in perceived parenting practices, some researchers argue that boys, especially in early adolescence, may be more sensitive to their parents' reactions during the emotion socialization process (Rueth et al., 2017). On the other hand, other researchers suggest that adolescent girls are affected more by negative parenting practices because they are more likely to show emotional reactions to social stressors (Chaplin et al., 2022). However, there are also studies that found that adolescents' gender did not play a significant moderating role in the relationship between parental psychological control and rejection and adolescents' emotion regulation skills (Beliveau et al., 2023; Saritaş et al., 2013). Nevertheless, gender differences in child-rearing practices are particularly pronounced in Mediterranean societies where gender roles are prominent (Palut, 2010; Sunar & Fişek, 2005). Moreover, the age range of adolescents in previous studies varied across studies, which may explain the inconsistencies in the findings. That is, the relationship between parenting behaviors and emotion regulation may be stronger for one gender during certain time periods of adolescence, but not at other times. Thus, testing the moderating role of gender is likely to provide further insights into understanding gendered differential pathways to emotion regulation during adolescence. To this end, the current study examined the moderator role of adolescents' gender in the proposed mediation model.

### **3.1.6. The Current Study**

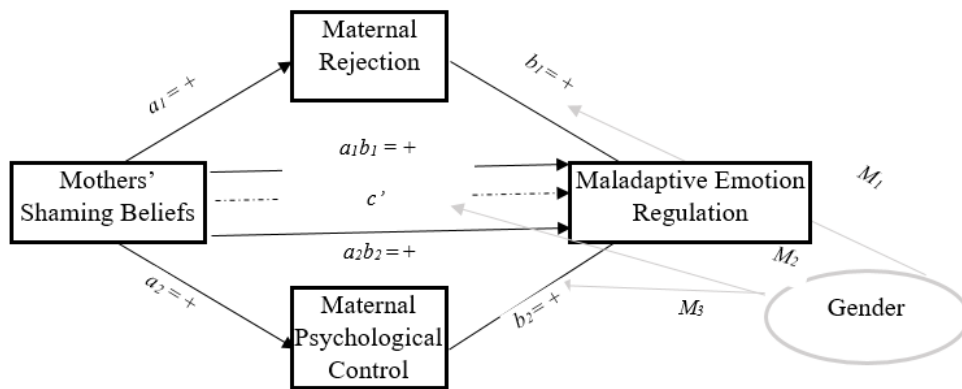
In summary, many studies in the literature have found evidence that both maladaptive cognitive emotion regulation and emotional problems such as depression show a dramatic increase during adolescence (Jose & Brown, 2008). Given the positive relationship between maladaptive emotion regulation and early-onset affect disorders (Cracco et al., 2017; Power & Casey, 2015; Steinberg, 2005), it seems important to identify the antecedents of maladaptive emotion regulation strategies in adolescence in order to improve the psychological health of adolescents. In this respect, previous findings have emphasized the pivotal role of familial context on emotion regulation development (Eisenberg et al., 1998; Morris et al., 2007). According to the developmental niche framework (Super & Harkness, 1997), child-rearing beliefs and behaviors influence child development by organizing the socialization context in which parent and child interact. Furthermore, the model suggests that parenting beliefs are largely regulated by cultural values and provide parents with a framework for parenting behaviors to achieve culturally desirable child outcomes (Harkness & Super, 2006). Specifically, many empirical studies have revealed that parents' beliefs about

emotions determine their parenting strategies in emotional socialization and thus predict children's emotional functioning (Halberstadt et al., 2013; Trommsdorff & Friedlmeier, 2010). However, previous studies examining parenting beliefs and behaviors in terms of emotional development have mainly focused on toddlers and preschool children, but neglected adolescents. Although non-parental institutions become prominent in adolescents' socialization context with puberty, research has shown that parents continue to significantly influence adolescent children's emotion regulation development in a variety of ways (Morris et al., 2017). Besides, some researchers consider adolescence to be a particularly sensitive period in terms of the effects of social stimuli in the environment (Blakemore & Mills, 2014; Steinberg, 2005). Based on this, adolescents may be even more influenced by subtle cultural messages such as parenting beliefs as well as parenting behaviors in their socialization context. Therefore, testing the developmental niche framework in relation to adolescents' emotion regulation is thought to contribute to the existing literature.

Since the functions and meanings of emotions vary across cultures, parents from diverse cultures also differ in their beliefs about emotion inducing strategies. Namely, parents with a collectivist orientation generally have more positive beliefs about the shaming strategy used to teach the child interdependent values (Fung, 1999). However, parental shaming is usually perceived negatively by individual-oriented adolescents, and predict non-optimal developmental outcomes in adolescents (Helwig et al., 2014; Smetana et al., 2021). This may be particularly true in countries like Türkiye, where collectivist parents have individual-oriented children (Mayer et al., 2012). In such a case, adolescent children of parents with positive beliefs about shaming may perceive parents' actions as more rejecting and psychologically controlling, and through this pathway, shaming beliefs may be associated with maladaptive emotion regulation in adolescents. Basically, the current study aims to examine this mediation pathway in a school-aged sample. Further, since previous studies emphasized the significant role of developmental phase and child gender in emotional development, their moderator roles were tested in the proposed model.

Specifically, since mothers in Türkiye are considered primary caregivers and thus are prominent figures in the context of children's socialization (Sunar & Fişek, 2005), only the beliefs and behaviors of mothers were examined in this study. Moreover, researchers have emphasized age-related transformations in cognitive, social and emotional aspects during adolescence (Spear, 2000); therefore, in order to capture the dynamic nature of adolescent development, this study focused on three developmental phases of adolescence separately: pre-, early and middle adolescence. In the light of the given literature, the following hypotheses are formulated (see Figure 4).

- 1) It was expected that mothers' shaming beliefs would be associated with non-optimal emotional outcomes in adolescents. In particular, it was hypothesized that mothers' positive child-rearing beliefs about shaming predict more use of maladaptive cognitive emotion regulation strategies such as self-blame, rumination and catastrophizing.
- 2) It was expected that the behaviors of mothers with positive beliefs about shaming would be perceived more negatively by their children. Therefore, it was hypothesized that mothers' shaming beliefs would be positively associated with perceived maternal rejection and psychological control.
- 3) It was expected that negative parenting would hinder optimal emotional development. That is, it was hypothesized that mothers' rejecting and psychologically controlling behaviors would be positively associated with more frequent use of maladaptive emotion regulation strategies such as self-blame, rumination, and catastrophizing.
- 4) It was expected that positive beliefs about shaming would predict negative parenting behaviors and thus increase the risk of maladaptive emotion regulation in adolescents. That is, it was hypothesized that mothers who believe that shaming is an effective strategy in child rearing would engage in more rejecting and psychologically controlling behaviors. In turn, such parenting behaviors would predict more frequent use of maladaptive strategies such as self-blame, rumination, and catastrophizing.
- 5) It was expected that adolescent gender would moderate the link between parenting beliefs and emotion regulation strategies, and also parenting behaviors and emotion regulation strategies. However, due to the mixed results reported in the literature, we did not formulate a specific hypothesis for the direction of this effect, but only tested it exploratory.
- 6) As children get older, beliefs about shaming were expected to be perceived more negatively and have a more negative impact on emotional development. That is, it was hypothesized that the proposed relationships would become stronger later in adolescence.



*Note.* Each emotion regulation strategy (i.e., self-blame, rumination and catastrophizing) was included in the model individually. In addition, the model was tested separately for primary, secondary and high school levels. To avoid confusion, moderated mediation paths for gender were not illustrated in the model.

Figure 4. The Proposed Moderated Mediation Model

### 3.2. Method

#### 3.2.1. Participants

Similar to Study 1, participants were recruited from the “Turkish Family, Child and Adolescent Project”. However, since parenting beliefs were obtained from mothers, only those with mother-child matched data were included in Study 2. Accordingly, there were 1051, 1955 and 1397 mother-child pairs at primary, middle and high school levels, respectively. Specifically, at the primary school level, preadolescents' ages ranged from seven to twelve ( $M = 9.19$ ,  $SD = 0.75$ ) and gender distribution was almost equal (girls = 49%,  $n = 515$ ). At secondary school level, early adolescents' ages ranged from nine to fifteen ( $M = 11.98$ ,  $SD = 1.26$ ), and 54.7% ( $n = 1069$ ) of the participants were girls at this school level. Finally, at high school level, middle adolescents' ages ranged between 12-18 years, and 55% ( $n = 768$ ) of them were girls. More detailed information on demographic characteristics, including the distribution of grade levels, perceived socioeconomic status and maternal variables, was presented in Table 9.



Table 9. Demographic Characteristics of the Sample in Study 2

	Primary School (Grade 3 & 4)				Secondary School (Grade 5, 6, 7 & 8)				High School (Grade 9, 10 & 11)			
	<i>N</i>	<i>%</i> <i>/Range</i>	<i>Mean</i>	<i>SD</i>	<i>N</i>	<i>Percent /</i> <i>Range</i>	<i>Mean</i>	<i>SD</i>	<i>N</i>	<i>Percent</i> <i>/ Range</i>	<i>Mean</i>	<i>SD</i>
Grade Level												
Grade 3/5/9	530	50.4%			522	26.7%			503	36%		
Grade 4/6/10	521	49.6%			506	25.9%			472	33.8%		
Grade 7/11					471	24.1%			422	30.2%		
Grade 8					456	23.3%						
Students' Age	1051	7-12	9.19	.75	1955	9-15	11.98	1.26	1397	12-18	15.36	1.15
Students' Gender												
Girls	515	49%			1069	54.7%			768	55%		
Boys	536	51%			886	45.3%			629	45%		
Mothers' Age	1040	22-52	36.53	5.16	1900	26-61	38.69	5.37	1373	30-62	41.71	5.18
Mothers' Education Level												
Illiterate	32	3%			52	2.7%			43	3.1%		
Literate	23	2.2%			78	4%			46	3.3%		
Primary School	214	20.4%			582	29.8%			435	31.1%		
Secondary School	164	15.6%			350	17.9%			220	15.7%		
High School	320	30.4%			554	28.3%			416	29.8%		
College	266	25.3%			319	16.3%			215	15.4%		
Post graduate	32	3.1%			20	1%			22	1.6%		

Table 9 (cont'd). Demographic Characteristics of the Sample in Study 2

	Primary School (Grade 3 & 4)				Secondary School (Grade 5, 6, 7 & 8)				High School (Grade 9, 10 & 11)			
	<i>N</i>	<i>%</i> <i>/Range</i>	<i>Mean</i>	<i>SD</i>	<i>N</i>	<i>Percent /</i> <i>Range</i>	<i>Mean</i>	<i>SD</i>	<i>N</i>	<i>Percent</i> <i>/ Range</i>	<i>Mean</i>	<i>SD</i>
Mothers' Marital Status												
Married to father of participated child	996	94.8%			1823	93.2%			1271	91%		
Divorced	39	3.7%			81	4.1%			77	5.5%		
Widow	8	0.8%			27	1.4%			26	1.9%		
Remarried	8	0.8%			24	1.2%			23	1.6%		
Mothers' Employment Status												
Working	285	27.1%			462	23.6%			442	31.6%		
Not Working	766	72.9%			1493	76.4%			955	68.4%		
Student Perceived SES	-	-	-	-	1955	1-10	6.05	1.99	1397	1-10	5.78	1.70
Mother Perceived SES	1051	1-10	4.28	1.93	1955	1-10	4.07	1.92	1397	1-10	4.35	1.90

*Note.* Perceived socioeconomic status were not asked to students at primary school level

## **3.2. 2. Measures**

### **3.2.2.1. Child-Rearing Beliefs Questionnaire (CRBQ; Lieber et al., 2006).**

The CRBQ originally was developed to measure Chinese parents' beliefs about child-rearing on four dimensions of parenting strategies (training, shaming, authoritative, and autonomy). In the scope of this study, only shaming subscale (e.g., children should be shamed when disobeying rules) was used. The items were translated into Turkish by using translation-back translation procedure. Then, a total of 8 items, each of which uses a Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree), was rated by participated mothers. Mean composite scores were constructed such that higher scores indicate more positive beliefs about shaming in child rearing. In the current sample, Cronbach's alpha values were found .84, .83, and .82 for primary, secondary and high school levels, respectively.

### **3.2.2.2. The Parental Acceptance-Rejection Questionnaire (PARQ; Rohner & Khaleque, 2005).**

PARQ is a 24-item scale designed to measure the degree of parental acceptance/rejection that children perceive from their parents. The total perceived maternal rejection score was calculated by taking the composite scores of the four subscales. These include parental *warmth/affection* (e.g., my mother "lets me know she loves me"), *hostility/aggression* (e.g., yells at me when she is angry), *indifference/neglect* (e.g., "pays no attention to me"), and *undifferentiated rejection* (e.g., "does not really love me"). In this study, reversed warmth items were included in the total mean composite score of maternal rejection. The items were asked to children on a 4-point Likert scale (1-always; 4- never). Higher scores indicate higher levels of perceived rejection from mothers. Cronbach's alpha values were .85 for primary school, .92 for secondary schools and .94 for high school levels.

### **3.2.2.3. The Psychological Control Scale - Youth Self Report (Barber, 1996).**

The scale assesses the extent to which children perceive psychological control from their mothers on a 4-point Likert-type scale (1-No, never; 4-Yes, always) and includes 10 items (e.g., "my mother is less friendly with me if I do not see things her way"). Mean composite scores were created, with higher scores indicating higher psychological control perceived from the mother. Internal consistency for the Turkish version was found to be acceptable ( $\alpha = .80$ ), (Sayıl & Kındap, 2010). In the current study, Cronbach's alphas were .75 for primary school, .81 for secondary school, and .83 for high school levels.

#### **3.2.2.4. Cognitive Emotion Regulation Questionnaire (CERQ; Garnefski et al., 2001; 2007).**

The maladaptive emotion regulation of adolescents was assessed with the same scale in Study 1. In particular, three subscales (self-blame, rumination, and catastrophizing), which are reported in the literature as maladaptive ways of emotion regulation, were included in this study. Composite mean scores were created for each subscale, where higher scores indicate that the relevant strategy is used more frequently. For the current sample, internal consistency reliabilities were found to be within acceptable ranges. That is, Cronbach's alpha values for *rumination* (e.g., I often think of what I am thinking and feeling about it) were .76, .81, and .80 at the primary, secondary, and high school levels, respectively. For *self-blame* (e.g., I think that it's my own fault), Cronbach's alpha values were .75, .77, .81 at primary, secondary, and high school levels, respectively. Finally, for *catastrophizing* (e.g., I often think that it's much worse than what happens to others), Cronbach's alphas were .70, .75, and .75 at primary, secondary, and high school levels, respectively.

#### **3.2.3. Procedure**

The sample for the current study was taken from the "Türkiye Family, Child and Adolescent Project" mentioned in the Study 1. This means that the procedure is the same as in the first part. Therefore, this section is not included here to avoid repetition. However, details on the data collection process can be followed in the procedure section of Study 1.

#### **3.4. Results**

This section started with the results of preliminary analyses aimed at preparing data for analysis. Then, the descriptive and correlational statistics among main variables were reported separately for each gender and each school level. Finally, the results of the moderated mediation analyses for each school level were described sequentially.

##### **3.4.1. Preliminary Analyses**

The aim of the current study was to investigate whether mothers' beliefs about shaming predicts preadolescent and adolescents' maladaptive emotion regulation strategies through perceived maternal parenting at different phases of adolescence (i.e. the phases of adolescence were analyzed through school levels). Furthermore, it was aimed to examine the moderating role of adolescents' gender on the proposed mediation model. For this purpose, three moderated mediation analyses were conducted for each of self-blame, rumination and catastrophizing strategies to test the proposed hypotheses.

The statistical analyses were performed using IBM SPSS Statistics version 28.0.0.0. In addition, moderated mediation analyses were conducted using model 15 of PROCESS Macro for SPSS version 4.0 (Hayes, 2017). Before the main analyses, regression assumptions (univariate and multivariate outliers, normality, linearity and multicollinearity) were assessed separately for primary, secondary and high school data sets. With respect to assumption checks, the guidelines suggested by Tabachnick and Fidell (2007) were followed. No missing data was detected in any dataset, so missing analysis was not required. The results of assumption checks were described below for each school level respectively.

At the *primary school* level, the results showed that the kurtosis values of maternal rejection and psychological control were 3.42 and 2.13, respectively, exceeding the acceptable  $|2|$  limits (George & Mallery, 2010). Therefore, a square root transformation was applied to these variables to reduce the impact of univariate outliers and improve normality as well as linearity. Apart from these variables, the evaluation of assumptions showed satisfactory results for mothers' beliefs about shaming and children's emotion regulation strategies. However, using the Mahalanobis distance criterion, three multivariate outliers were found at  $p < .001$  and these cases were deleted, resulting in a sample of 1051 mother-child pairs. In addition, since the correlation between the predictor variables ranged between  $-.02$  and  $.40$ , there was no multicollinearity in the analyses.

At the *secondary school* level, the evaluation of kurtosis (4.63) and univariate outliers (29 cases) suggested the use of a transformation for total maternal rejection. First, a square root transformation was applied to this variable. However, since the kurtosis value of 2.38 was still greater than 2, it was decided to apply a logarithmic transformation for mothers' total rejection scores. Regarding psychological control, skewness (1.20) and kurtosis (1.60) values are within the acceptable range. However, 17 cases with a z-score greater than 3.29 were identified as univariate outliers for maternal psychological control. Therefore, in order to reduce their impacts on the results, winsorizing method was used by replacing the extreme scores with scores .05 units larger than the nearest score. Except negative parenting variables, the results of evaluation of assumptions were satisfactory for other study variables. However, four cases were deleted from the dataset due to multivariate outliers. Thus, the sample size for the main analysis was reduced to 1955. Lastly, the highest correlation was observed between total maternal rejection and psychological control with  $r = .63$ , indicating that the multicollinearity assumption was met.

At the *high school* level, the results showed that the kurtosis values were above the absolute value of 2 with 2.83 and 17 cases were found as univariate outliers. Therefore, square root

transformation was applied for the maternal rejection variable. Furthermore, the normality values for maternal psychological control (skewness = 1.02; kurtosis = 0.78) were within acceptable ranges. However, there were seven cases that were found to be univariate outliers. For this reason, winsorizing was applied to the psychological control raw scores in seven cases. Except negative parenting variables, the results of evaluation of assumptions were satisfactory for other study variables. A total of six cases were found to be multivariate outliers. With the deletion of these cases from the data set, the final sample size decreased to 1397 for this school level. Since the highest correlation was observed between total maternal rejection and psychological control with  $r = .67$ , assumption of multicollinearity was assumed to be met.

After this step, moderated mediation analyses were conducted by including gender as a moderator variable in the pathways from mothers' beliefs about shaming and their parenting behaviors to adolescents' maladaptive emotion regulation strategies. In the analyses, all continuous variables were added to the model as mean-centered, and gender was included as dummy variable (girls were coded as "0"). Besides, for the percentile bootstrap confidence intervals, the bootstrap sample size was chosen as 5000.

### **3.4.2. Correlational Statistics**

At the *primary school* level, results for correlations between the main study variables showed that gender was significantly associated with maternal rejection ( $r = .07$ ) and psychological control ( $r = .10$ ). That is, pre-adolescent boys perceived more rejecting and psychologically controlling parenting from their mothers than pre-adolescent girls. On the other hand, pre-adolescent girls reported more frequent use of rumination ( $r = -.07$ ) and catastrophizing ( $r = -.09$ ) strategies to manage stressful events. With respect to mothers' beliefs about shaming, the only significant correlation was found for maternal rejection ( $r = .14$ ). That is, preadolescents with mothers who have positive beliefs about shaming perceived their mothers as more rejecting. Lastly, regarding the relationships between parenting behaviors and maladaptive emotion regulation strategies, maternal rejection was found negatively with rumination ( $r = -.19$ ), whereas maternal psychological control was positively correlated with self-blame ( $r = .24$ ), rumination ( $r = .14$ ) and catastrophizing ( $r = .24$ ).

At the *secondary school* level, early adolescents' gender was significantly related only to the rumination strategy ( $r = -.11$ ). Accordingly, girls ruminated more about negative events they experienced compared to boys. Regarding child rearing beliefs, mothers' beliefs about shaming were positively correlated with mothers' rejection behaviors ( $r = .05$ ) and the use of catastrophizing ( $r = .07$ ) in early adolescence. In terms of the correlations between parenting

behaviors and maladaptive emotion regulation, the results showed that mothers' rejection behaviors were positively associated with early adolescents' self-blame ( $r = .14$ ) and catastrophizing ( $r = .14$ ) strategies and negatively associated with rumination ( $r = -.10$ ) strategies. On the other hand, maternal psychological control was found positively correlated with early adolescents' self-blame ( $r = .13$ ), rumination ( $r = .27$ ) and catastrophizing ( $r = .29$ ) strategies.

At the *high school* level, the results yielded that middle adolescents' gender was significantly associated with mothers' negative parenting behaviors and adolescents' maladaptive cognitive emotion regulation strategies. Accordingly, girls perceived their mothers as more rejecting ( $r = -.11$ ) and psychologically controlling ( $r = -.11$ ) than boys. In addition, girls engaged in more rumination ( $r = -.19$ ), self-blame ( $r = -.08$ ) and catastrophizing ( $r = -.15$ ) in response to stressful events. Lastly, with respect to the correlations between parenting behaviors and maladaptive emotion regulation strategies, maternal rejection and psychological control were positively related to child's self-blame ( $r = .18$ ;  $r = .28$ , respectively), rumination ( $r = .05$ ;  $r = .23$ , respectively), and catastrophizing ( $r = .19$ ;  $r = .32$ , respectively). In detail, descriptive statistics including means and standard deviations and correlations between the study variables at each school level are shown in Tables 10, 11, 12 respectively.

### **3.4.3. Main Analyses**

The main analyses were utilized for each school level (i.e., primary, secondary and high school) and maladaptive emotion regulation strategy (i.e., self-blame, rumination and catastrophizing). In this respect, a total of nine moderated mediation analyses were performed to examine whether mothers' beliefs about shaming predict adolescents' maladaptive emotion regulation through perceived negative parenting behaviors at different phases of adolescence. Along with this, the possible moderator role of adolescents' gender was also tested in the proposed pathways. This section first presented the results of *hypothesis 1* (i.e., mothers' shaming beliefs  $\rightarrow$  adolescents' emotion regulation strategies), *hypothesis 2* (i.e., mother's shaming beliefs  $\rightarrow$  perceived negative parenting behaviors), and *hypothesis 3* (perceived negative parenting behaviors  $\rightarrow$  adolescents' emotion regulation strategies), obtained from direct path analyses. Then, conditional indirect path (mediating) analyses were reported, which provided results related to *hypothesis 4* (i.e., mothers' shaming beliefs  $\rightarrow$  negative parenting  $\rightarrow$  adolescents' emotion regulation strategies). Furthermore, since the *hypothesis 5* (i.e., moderating role of gender) includes both direct and indirect paths, results for the moderation and moderated mediation analyses were reported with direct and indirect analyses, respectively. Finally, with respect to *hypothesis 6* (i.e., moderating role of developmental phase), the proposed pathways were tested and thus reported separately for each school level.

Table 10. Correlational Statistics for Primary School Level in Study 2

	1	2	3	4	5	6	7	8	9
1. Gender	—								
2. Mother's Shaming Beliefs	-.02	—							
3. Mother's Rejection	.07*	.14**	—						
4. Mother's Rejection <sup>S</sup>	.07*	.14**	1.00	—					
5. Mother's Psychological Control	.10**	.05	.40**	.40**	—				
6. Mother's Psychological Control <sup>S</sup>	.10**	.05	.39**	.39**	1.00	—			
7. Self-Blame	.01	-.02	.01	.00	.24**	.24**	—		
8. Rumination	-.07*	-.05	-.18**	-.19**	.14**	.14**	.60**	—	
9. Catastrophizing	-.09*	.00	.00	-.00	.24**	.24**	.59**	.63**	—
10. Mother's Education Level	.08*	-.49**	-.18**	-.18**	-.05	-.04	.01	.06	-.04
<i>Mean</i>	.51	2.77	1.42	1.18	1.56	1.24	2.67	3.03	2.70
<i>SD</i>	.50	0.82	0.34	0.14	0.42	0.16	1.00	1.03	1.01
<i>Min-Max</i>	0-1	1-5	1-2.88	1-1.70	1-3.5	1-1.87	1-5	1-5	1-5

Note.  $N = 1051$ , \* $p < .05$ ; \*\* $p < .001$ ; <sup>S</sup> Square root transformed value; Girls were coded as "0"; whereas boys were coded as "1".



Table 11. Correlational Statistics for Secondary School Level in Study 2

	1	2	3	4	5	6	7	8	9
1. Gender	—								
2. Mother's Shaming Beliefs	.04	—							
3. Mother's Rejection	-.01	.04	—						
4. Mother's Rejection <sup>L</sup>	.00	.05*	.98**	—					
5. Mother's Psychological Control	.04	.04	.64**	.63**	—				
6. Mother's Psychological Control <sup>W</sup>	.04	.04	.64**	.63**	1.00	—			
7. Self-Blame	-.03	.00	.14**	.14**	.27**	.27**	—		
8. Rumination	-.11**	.00	-.08**	-.10**	.13**	.13**	.54**	—	
9. Catastrophizing	-.05*	.07*	.14**	.14**	.28**	.29**	.58**	.64**	—
10. Mother's Education Level	.01	-.40**	-.09**	-.10**	-.04	-.04	-.04	-.01	-.07*
<i>Mean</i>	.45	2.92	1.45	0.15	1.64	1.64	2.89	3.33	2.95
<i>SD</i>	.50	0.84	0.42	0.11	0.49	0.48	0.97	0.99	0.99
<i>Min-Max</i>	0-1	1-5	1-3.88	0-.59	1-3.80	1-3.45	1-5	1-5	1-5

Note.  $N = 1955$ , \* $p < .05$ ; \*\* $p < .001$ ; <sup>L</sup>Logarithmically transformed value; <sup>W</sup>Winsorized value; Girls were coded as "0"; whereas boys were coded as "1".

Table 12. Correlational Statistics for High School Level in Study 2

	1	2	3	4	5	6	7	8	9
1. Gender	—								
2. Mother's Shaming Beliefs	.02	—							
3. Mother's Rejection	-.12**	.01	—						
4. Mother's Rejection <sup>S</sup>	-.11**	.01	1.00	—					
5. Mother's Psychological Control	-.11**	.04	.67**	.67**	—				
6. Mother's Psychological Control <sup>W</sup>	-.11**	-.04	.67**	.67**	1.00	—			
7. Self-Blame	-.08*	.01	.18**	.18**	.28**	.28**	—		
8. Rumination	-.19**	-.05	.06*	.05*	.23**	.23**	.53**	—	
9. Catastrophizing	-.15**	.01	.19**	.19**	.32**	.32**	.51**	.58**	—
10. Mother's Education Level	.06*	-.40**	-.02	-.02	.04	.04	.01	.02	-.02
<i>Mean</i>	.45	2.91	1.55	1.23	1.75	1.75	3.03	3.56	3.00
<i>SD</i>	.50	0.78	0.47	0.18	0.54	0.54	0.92	0.90	0.92
<i>Min-Max</i>	0-1	1-5	1-3.88	1-1.97	1-3.70	1-3.60	1-5	1-5	1-5

Note.  $N = 1051$ , \* $p < .05$ ; \*\* $p < .001$ ; <sup>S</sup> Square root transformed value; <sup>W</sup> Winsorized value; Girls were coded as "0"; whereas boys were coded as "1".

### **3.4. 3. 1. The Results for Direct Paths**

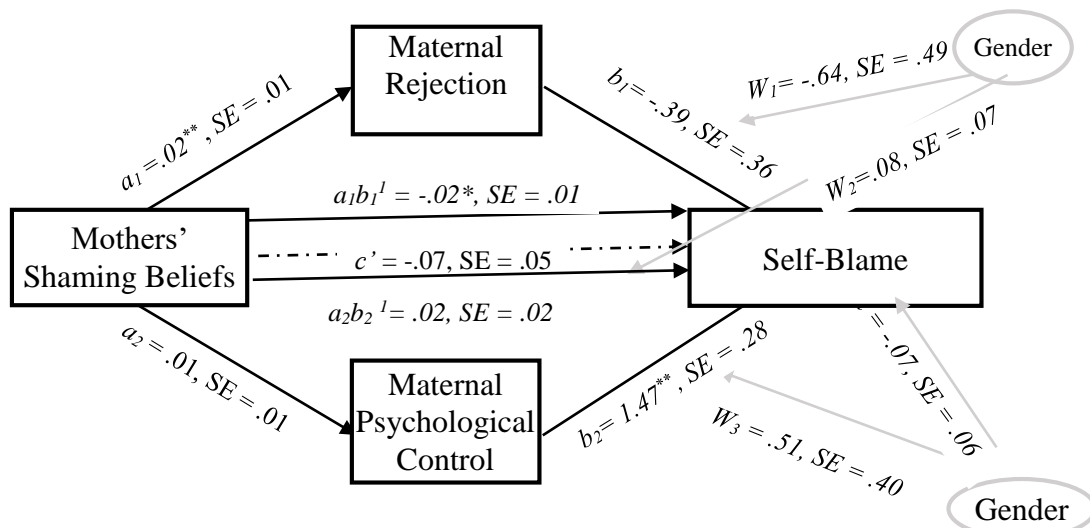
#### **3.4. 3. 1. 1. At the Primary School Level**

At the primary school level, mothers' shaming beliefs were not directly associated with preadolescents' use of self-blame ( $B = -.07, SE = .05, p = .229$ ) and catastrophizing ( $B = -.04, SE = .05, p = .423$ ) strategies. However, results showed that pre-adolescents whose mothers held positive beliefs about shaming tended to ruminate less in response to stressful experiences ( $B = -.13, SE = .05, p < .05$ ). Regarding the link between parents' beliefs and behavior, the results revealed that pre-adolescents perceived more rejection from their mothers who held positive shaming beliefs ( $B = .02, SE = .01, p < .001$ ). However, mothers' shaming beliefs did not predict perceived mothers' psychological control at primary school level ( $B = .01, SE = .01, p = .120$ ). Finally, the results regarding the prediction of pre-adolescents' emotion regulation strategies by mothers' negative parenting behaviors showed that mothers' rejection behaviors negatively predicted rumination ( $B = -1.88, SE = .37, p < .001$ ) and catastrophizing ( $B = -.76, SE = .36, p < .05$ ) strategies, but not self-blame ( $B = -.39, SE = .36, p = .279$ ) strategy. On the other hand, mothers' psychological control positively predicted all three maladaptive emotion regulation strategies (for *self-blame*:  $B = 1.47, SE = .28, p < .001$ ; for *rumination*:  $B = 1.53, SE = .28, p < .001$ ; for *catastrophizing*:  $B = 1.63, SE = .28, p < .001$ ). The results for self-blame, rumination and catastrophizing in primary school were presented in Figures 5, 6, and 7, respectively.

#### **3.4. 3. 1. 2. At the Secondary School Level**

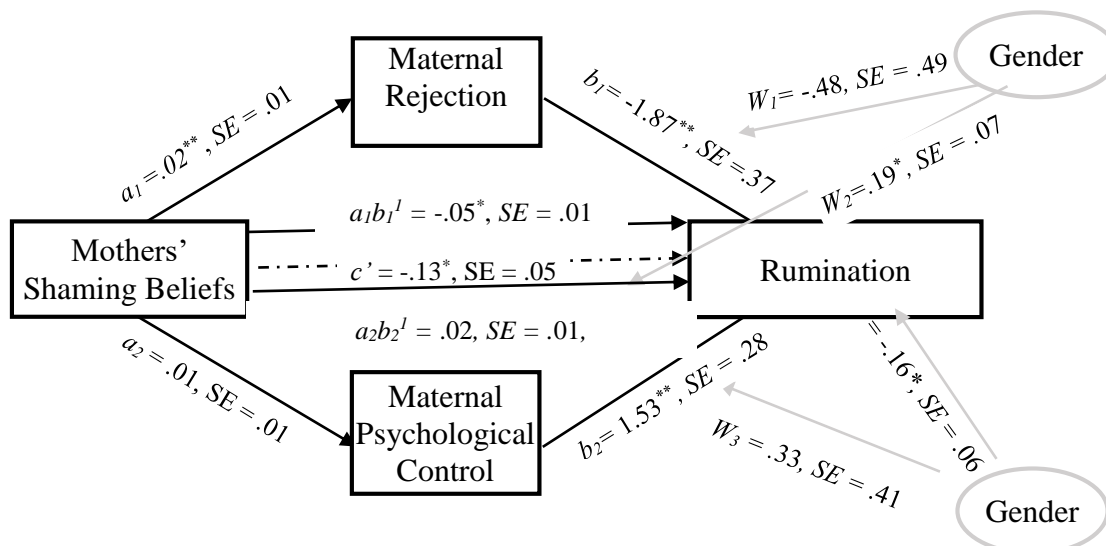
At the secondary school level, mothers' shaming beliefs were not directly associated with early adolescents' use of self-blame ( $B = .05, SE = .03, p = .185$ ) and rumination ( $B = .03, SE = .04, p = .518$ ). However, the results revealed that mothers' positive beliefs about shaming positively predicted early adolescents' catastrophizing ( $B = .09, SE = .04, p < .05$ ). The results of estimating the relationship between parents' beliefs and behaviors revealed that early adolescents with mothers who held positive shaming beliefs perceived more maternal rejection ( $B = .01, SE = .01, p < .05$ ). However, mothers' shaming beliefs did not predict perceived mothers' psychological control ( $B = .02, SE = .01, p = .070$ ). Finally, with respect to the link between negative parenting and maladaptive emotion regulation in early adolescence, the results showed that mothers' rejection behaviors negatively predicted rumination ( $B = -.02, SE = .34, p < .001$ ) but not either catastrophizing ( $B = -.44, SE = .34, p = .205$ ) or self-blame ( $B = -.02, SE = .34, p = .963$ ) strategies. However, mothers' psychological control positively predicted all three maladaptive emotion regulation strategies (for *self-blame*:  $B = .54, SE = .08, p < .001$ ; for *rumination*:  $B = .62, SE = .08, p < .001$ ; for *catastrophizing*:  $B = .67, SE = .08,$

$p < .001$ ). The results for self-blame, rumination and catastrophizing in secondary school were presented in Figures 8, 9, and 10, respectively.



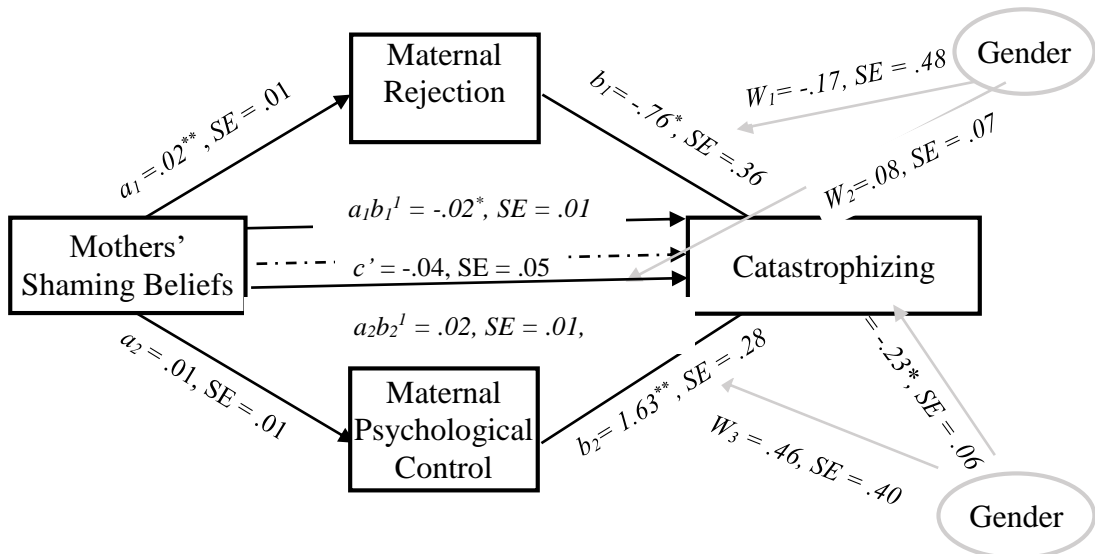
Note. <sup>1</sup>Since PROCESS Macro's model 15 does not provide results for unconditional indirect paths ( $ab$ ), results for these effects are drawn from simple mediation analysis including gender covariates. In the simple mediation analysis, a significant difference was found only for path  $b_1$ , indicating that maternal rejection predicted self-blame negatively.  $a_1b_1 = 95\% \text{ CI } [-.033, -.005]$ ;  $a_2b_2 = 95\% \text{ CI } [-.004, .038]$ ; \*  $p < .05$ ; \*\*  $p < .001$ .

Figure 5. The Results for predicting Self-Blame at Primary School Level



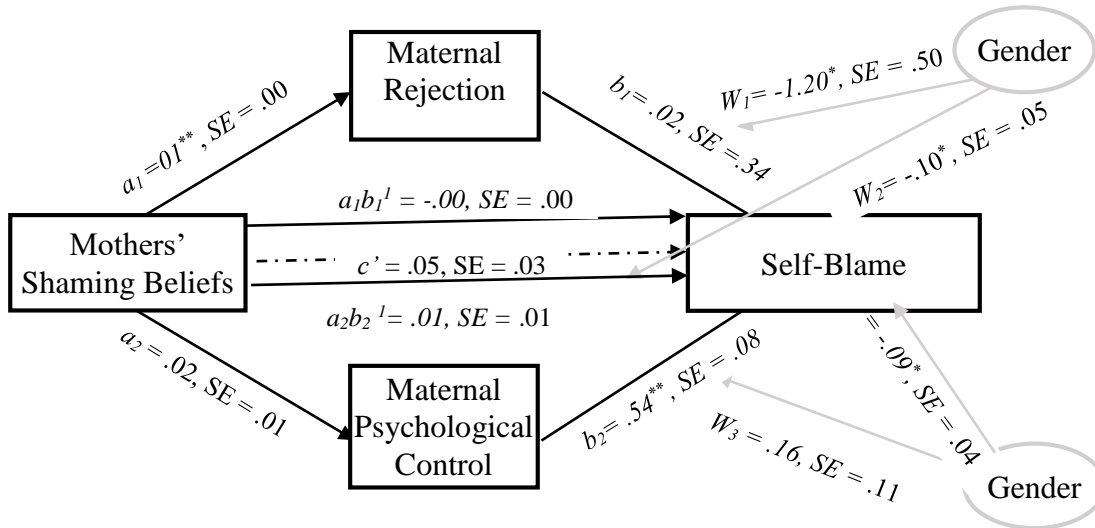
Note. <sup>1</sup>the results for unconditional indirect effects ( $ab$ ) are drawn from simple mediation analysis including gender covariates. In the simple mediation analysis, only significant difference was found for path  $c'$ , indicating that mothers' shaming beliefs did not significantly predict rumination.  $a_1b_1 = 95\% \text{ CI } [-.077, -.027]$ ;  $a_2b_2 = 95\% \text{ CI } [-.003, .039]$ ; \*  $p < .05$ ; \*\*  $p < .001$ .

Figure 6. The Results for predicting Rumination at Primary School Level



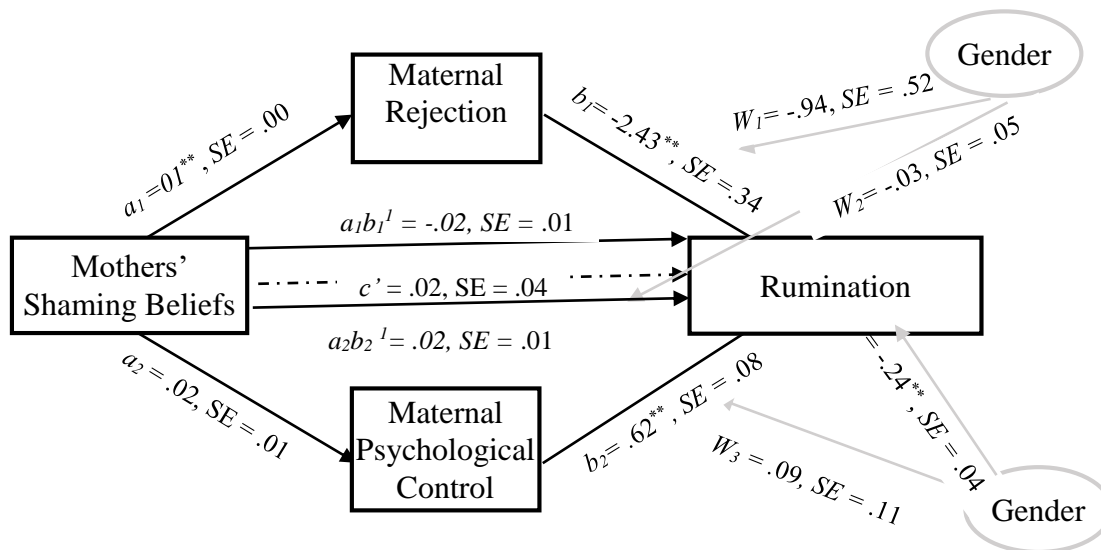
Note. <sup>1</sup>the results for unconditional indirect effects ( $ab$ ) are drawn from simple mediation analysis including gender covariates. In the simple mediation analysis, there was no significant difference in path coefficients.  $a_1b_1 = 95\% \text{ CI } [-.037, -.007]$ ;  $a_2b_2 = 95\% \text{ CI } [-.005, .041]$ ; \*  $p < .05$ ; \*\*  $p < .001$ .

Figure 7. The Results for predicting Catastrophizing at Primary School Level



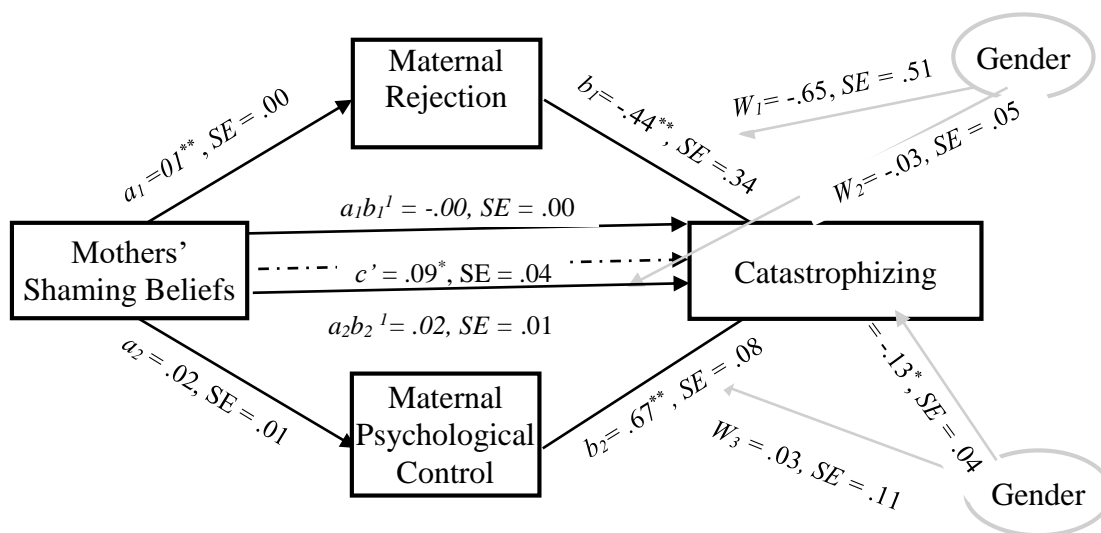
Note. <sup>1</sup>the results for unconditional indirect effects ( $ab$ ) are drawn from simple mediation analysis including gender covariates. The only significant difference was found for path  $b_1$ , indicating that maternal rejection predicted self-blame negatively.  $a_1b_1 = 95\% \text{ CI } [-.009, -.000]$ ;  $a_2b_2 = 95\% \text{ CI } [-.001, .031]$ ; \*  $p < .05$ ; \*\*  $p < .001$ .

Figure 8. The Results for predicting Self-Blame at Secondary School Level



Note. <sup>1</sup>the results for unconditional indirect effects ( $ab$ ) are drawn from simple mediation analysis including gender covariates. In the simple mediation analysis, there was no significant difference in path coefficients.  $a_1b_1 = 95\% \text{ CI } [-.035, -.001]$ ;  $a_2b_2 = 95\% \text{ CI } [-.002, .032]$ ; \*  $p < .05$ ; \*\*  $p < .001$ .

Figure 9. The Results for predicting Rumination at Secondary School Level

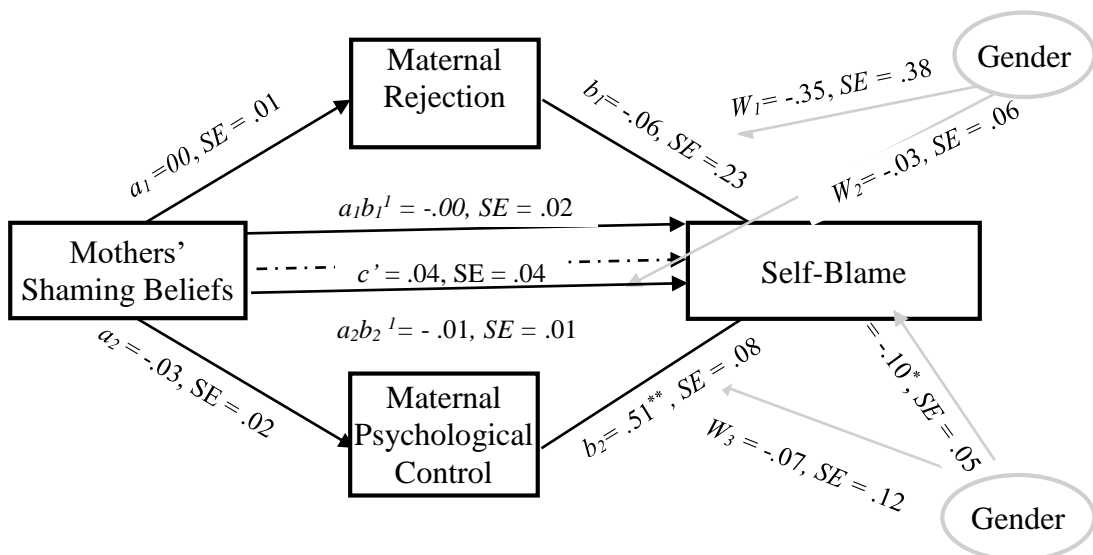


Note. <sup>1</sup>the results for unconditional indirect effects ( $ab$ ) are drawn from simple mediation analysis including gender covariates. In the simple mediation analysis, there was no significant difference in path coefficients.  $a_1b_1 = 95\% \text{ CI } [-.011, -.000]$ ;  $a_2b_2 = 95\% \text{ CI } [-.001, .033]$ ; \*  $p < .05$ ; \*\*  $p < .001$ .

Figure 10. The Results for predicting Catastrophizing at Secondary School Level

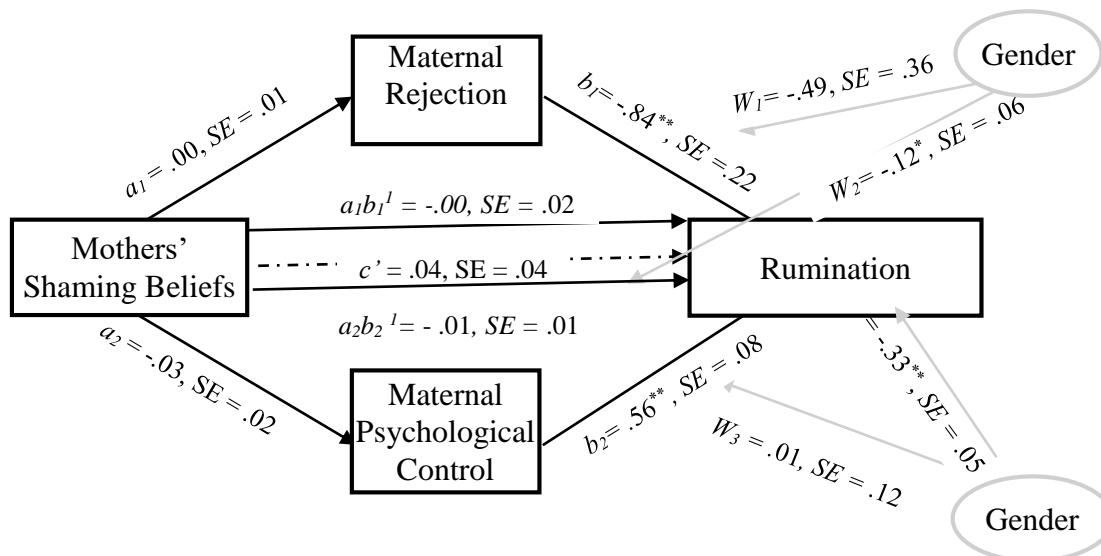
### 3.4.3.1.3. At the High School Level

At the high school level, the results showed that the mothers' beliefs about shaming did not directly predict middle adolescents' maladaptive emotion regulation (for *self-blame*:  $B = .04$ ,  $SE = .04$ ,  $p = .335$ ; for *rumination*:  $B = .02$ ,  $SE = .04$ ,  $p = .636$  and for *catastrophizing*:  $B = .06$ ,  $SE = .04$ ,  $p = .104$ ). Similarly, mothers' shaming beliefs were not significantly associated with either perceived maternal rejection ( $B = .00$ ,  $SE = .01$ ,  $p = .647$ ) or psychological control ( $B = -.03$ ,  $SE = .02$ ,  $p = .103$ ) at this school level. Lastly, with respect to the link between negative parenting and maladaptive emotion regulation in middle adolescents, the results revealed that mothers' rejection behaviors negatively predicted rumination ( $B = -.84$ ,  $SE = .22$ ,  $p < .001$ ) but not either catastrophizing ( $B = -.08$ ,  $SE = .22$ ,  $p = .705$ ) or self-blame ( $B = -.06$ ,  $SE = .23$ ,  $p = .794$ ) strategies. On the other hand, mothers' psychological control positively predicted all three maladaptive emotion regulation strategies (for *self-blame*:  $B = .54$ ,  $SE = .08$ ,  $p < .001$ ; for *rumination*:  $B = .56$ ,  $SE = .08$ ,  $p < .001$ ; for *catastrophizing*:  $B = .54$ ,  $SE = .08$ ,  $p < .001$ ). The results for self-blame, rumination and catastrophizing in high school were presented in Figures 11, 12, and 13, respectively.



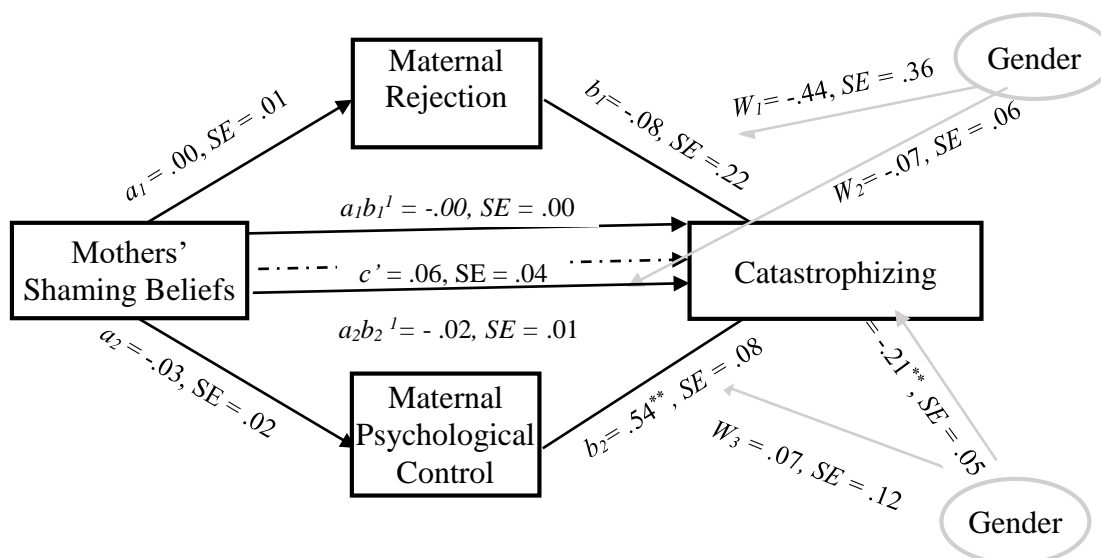
Note. <sup>l</sup>the results for unconditional indirect effects ( $ab$ ) are drawn from simple mediation analysis including gender covariates. In the simple mediation analysis, there was no significant difference in path coefficients.  $a_1 b_1 = 95\%$  CI  $[-.004, .003]$ ;  $a_2 b_2 = 95\%$  CI  $[-.035, .004]$ ; \*  $p < .05$ ; \*\*  $p < .001$

Figure 11. The Results for predicting Self-Blame at High School Level



Note. <sup>1</sup>the results for unconditional indirect effects ( $ab$ ) are drawn from simple mediation analysis including gender covariates. In the simple mediation analysis, there was no significant difference in path coefficients.  $a_1b_1 = 95\% \text{ CI } [-.016, .009]$ ;  $a_2b_2 = 95\% \text{ CI } [-.038, .004]$ ; \*  $p < .05$ ; \*\*  $p < .001$

Figure 12. The Results for predicting Rumination at High School Level



Note. <sup>1</sup>the results for unconditional indirect effects ( $ab$ ) are drawn from simple mediation analysis including gender covariates. In the simple mediation analysis, there was no significant difference in path coefficients.  $a_1b_1 = 95\% \text{ CI } [-.005, .003]$ ;  $a_2b_2 = 95\% \text{ CI } [-.037, .004]$ ; \*  $p < .05$ ; \*\*  $p < .001$

Figure 13. The Results for predicting Catastrophizing at High School Level



### 3.4.3.2. The Results for Moderation Paths

#### 3.4.3.2.1. At the Primary School Level

At the primary school level, the results only revealed a significant interaction between mothers' beliefs about shaming and pre-adolescents' gender ( $B = .19, SE = .07, p < .05$ ) (see Table 13). Accordingly, mothers' shaming beliefs predicted rumination only for girls at primary school level (see Table 14). More specifically, pre-adolescent girls whose mothers held positive child-rearing beliefs about shaming reported less rumination in response to stressful events ( $t = -2.33, SE = .06, p < .05$ ). In contrast, although this relationship showed an opposite trend for boys, the graph for pre-adolescent boys was not significant ( $t = 1.21, SE = .05, p = .228$ ), (see Figure 14.). Except for this, the moderating role of gender was not significant for the interaction effects between negative parenting behaviors and any maladaptive emotion regulation strategy.

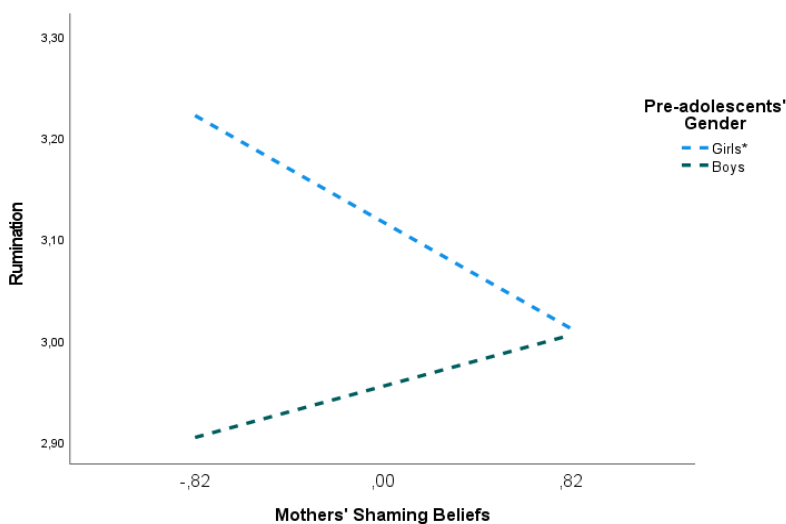


Figure 14. The Interplay between Mothers' Shaming Beliefs and Preadolescents' Gender for Rumination

#### 8.3.2.2. At the Secondary School Level

At the secondary school level, the results showed that early adolescents' gender moderated the relationship of self-blame strategy with mothers' shaming beliefs ( $B = -.10, SE = .05, p < .05$ ) and mothers' rejection behaviors ( $B = -1.20, SE = .51, p < .05$ ). However, the interaction plots between mothers' shaming beliefs and early adolescents' self-blame were not significant for genders (for girls:  $t = 1.33, SE = .04, p = .185$ ; for boys:  $t = -1.58, SE = .04, p = .114$ ) (see Table 14).

Table 13. The Results for the Direct and Moderated Pathways in Predicting Maladaptive CERS

Primary School	M1 (Rejection)			M2 (Psychological Control)			Y1 (Self-Blame)			Y2 (Rumination)			Y3 (Catastrophizing)		
	<i>B</i>	<i>SE</i>	<i>p</i>	<i>B</i>	<i>SE</i>	<i>p</i>	<i>B</i>	<i>SE</i>	<i>p</i>	<i>B</i>	<i>SE</i>	<i>p</i>	<i>B</i>	<i>SE</i>	<i>p</i>
X (Shaming Beliefs)	.02	.01	<b>&lt;.001</b>	.01	.01	.120	-.07	.05	.229	<b>-.13</b>	.05	.020	-.04	.05	.423
M1							-.39	.36	.279	<b>-1.88</b>	.37	<.001	<b>-.75</b>	.36	.034
M2							<b>1.49</b>	.28	<.001	<b>1.53</b>	.28	<.001	<b>1.63</b>	.28	<.001
W(gender)							-.07	.06	.276	<b>-.16</b>	.06	.008	<b>-.23</b>	.06	<.001
X *W							.08	.07	.253	<b>.19</b>	.07	.012	.08	.07	.267
M1*W							-.64	.49	.188	-.48	.49	.327	-.17	.48	.732
M2*W							.51	.40	.206	.33	.41	.427	.46	.40	.252
Constant	.00	.00	1.00	.00	.01	1.00	2.69	.04	<.001	3.12	.04	<.001	2.82	.04	<.001
	$F(1,1049) = 21.51, p < .001, R^2 = .02.$			$F(1,1049) = 2.42, p = .120$			$F(7,1043) = 10.96, p <.001, R^2 = .07.$			$F(7,1043) = 17.32, p <.001, R^2 = .10.$			$F(7,1043) = 13.86, p <.001, R^2 = .09.$		
Secondary School	<i>B</i>	<i>SE</i>	<i>p</i>	<i>B</i>	<i>SE</i>	<i>p</i>	<i>B</i>	<i>SE</i>	<i>p</i>	<i>B</i>	<i>SE</i>	<i>p</i>	<i>B</i>	<i>SE</i>	<i>p</i>
X (Shaming Beliefs)	.01	.00	<b>.037</b>	.02	.01	.070	.05	.03	.185	.03	.04	.518	<b>.09</b>	.04	.015
M1							.02	.34	.963	-2.43	<b>.34</b>	<.001	-.44	.34	.205
M2							<b>.54</b>	.08	<.001	.62	<b>.08</b>	<.001	<b>.67</b>	.08	<.001
W(gender)							<b>-.09</b>	.04	.041	-.24	<b>.04</b>	<.001	<b>-.13</b>	.04	.002
X *W							<b>-.10</b>	.05	.039	-.031	.05	.547	-.03	.05	.586
M1*W							<b>-1.20</b>	.51	.018	-.94	.52	.070	-.65	.52	.201
M2*W							.16	.11	.145	.092	.11	.423	.03	.11	.810
Constant	.00	.00	1.00	.00	.01	1.00	2.93	.03	<.001	3.44	.03	<.001	3.01	.03	<.001

Table 13 (cont'd). The Results for the Direct and Moderated Pathways in Predicting Maladaptive CERS

	<b>M1 (Rejection)</b>			<b>M2 (Psychological Control)</b>			<b>Y1 (Self-Blame)</b>			<b>Y2 (Rumination)</b>			<b>Y3 (Catastrophizing)</b>		
	<i>F</i> (1,1953) = 4.34, <i>p</i> < .05, <i>R</i> <sup>2</sup> = 002.			<i>F</i> (1,1953) = 3.29, <i>p</i> = .070, <i>R</i> <sup>2</sup> = 002.			<i>F</i> (7,1947) = 25.13, <i>p</i> < .001, <i>R</i> <sup>2</sup> = 08.			<i>F</i> (7,1947) = 26.84, <i>p</i> < .001, <i>R</i> <sup>2</sup> = 09.			<i>F</i> (7,1947) = 28.63, <i>p</i> < .001, <i>R</i> <sup>2</sup> = 09.		
<b>High School</b>	<i>B</i>	<i>SE</i>	<i>p</i>	<i>B</i>	<i>SE</i>	<i>p</i>	<i>B</i>	<i>SE</i>	<i>p</i>	<i>B</i>	<i>SE</i>	<i>p</i>	<i>B</i>	<i>SE</i>	<i>p</i>
X (Shaming Beliefs)	.00	.01	.647	-.03	.02	.103	.04	.04	.335	.02	.04	.636	.06	.04	.104
M1							-.06	.23	.794	<b>-.84</b>	.22	<.001	-.08	.22	.705
M2							<b>.54</b>	.08	<.001	<b>.56</b>	.08	<.001	<b>.54</b>	.08	<.001
W(gender)							<b>-.10</b>	.05	.038	<b>-.33</b>	.05	<.001	<b>-.21</b>	.05	<.001
X *W							-.03	.06	.574	<b>-.12</b>	.06	.045	-.07	.06	.220
M1*W							-.35	.38	.348	-.49	.36	.179	-.44	.37	.227
M2*W							-.07	.12	.542	.01	.12	.903	.07	.12	.537
Constant	.00	.01	.647	.00	.01	1.00	3.07	.03	<.001	3.70	.03	<.001	3.10	.03	<.001
	<i>F</i> (1,1395) = 0.21, <i>p</i> = .647.			<i>F</i> (1,1395) = 2.66, <i>p</i> = .103.			<i>F</i> (7,1389) = 18.75, <i>p</i> < .001, <i>R</i> <sup>2</sup> = 09.			<i>F</i> (7,1389) = 24.09, <i>p</i> < .001, <i>R</i> <sup>2</sup> = 11.			<i>F</i> (7,1389) = 26.21, <i>p</i> < .001, <i>R</i> <sup>2</sup> = 12.		

On the other hand, the interaction plots between mothers' rejection behaviors and adolescents' self-blame showed that maternal rejection predicted less use of self-blame for boys ( $t = -3.15$ ,  $SE = .38$ ,  $p < .01$ ) (see Figure 15). In contrast, maternal rejection was not significantly associated with self-blame for girls at secondary school level ( $t = 0.05$ ,  $SE = .34$ ,  $p = .962$ ). Apart from these, no interaction effects were found to be significant at the secondary school level (see Table 13).

Table 14. Moderating Effect of Gender on the Link Between Mothers' Shaming Beliefs and Maladaptive Emotion Regulation Strategies

X → Y	Condition	Direct Effect (B)	SE	t	p	95% CI
<b>Primary School</b>						
Shaming Beliefs → Self-Blame	Girls	-0.07	.05	-1.20	.229	[-.17, .04]
	Boys	0.02	.05	0.39	.701	[-.08, .12]
Shaming Beliefs → Rumination	Girls	-0.13	.06	<b>-2.33</b>	.020	[-.23, -.02]
	Boys	0.06	.05	1.21	.228	[-.04, .16]
Shaming Beliefs → Catastrophizing	Girls	-0.04	.05	-0.80	.420	[-.15, .06]
	Boys	0.04	.05	0.77	.441	[-.06, .14]
<b>Secondary School</b>						
Shaming Beliefs → Self-Blame	Girls	0.05	.04	1.33	.185	[-.02, .11]
	Boys	-0.06	.04	-1.58	.114	[-.13, .01]
Shaming Beliefs → Rumination	Girls	0.02	.04	0.65	.518	[-.05, .09]
	Boys	-0.01	.04	-0.22	.825	[-.08, .07]
Shaming Beliefs → Catastrophizing	Girls	0.09	.04	2.43	.015	[.02, .15]
	Boys	0.06	.04	1.53	.126	[-.02, .13]
<b>High School</b>						
Shaming Beliefs → Self-Blame	Girls	0.04	.04	0.96	.335	[-.04, .12]
	Boys	0.01	.05	0.11	.916	[-.08, .09]
Shaming Beliefs → Rumination	Girls	0.02	.04	0.47	.636	[-.06, .10]
	Boys	-0.10	.04	<b>-2.27</b>	.024	[-.19, -.01]
Shaming Beliefs → Catastrophizing	Girls	0.06	.04	1.63	.104	[-.01, .14]
	Boys	-0.01	.04	-0.19	.846	[-.10, .08]

### 3.4.3.3.3. At the High School Level

At the high school level, the results yielded only significant interaction effect between mothers' shaming beliefs and middle adolescents' rumination ( $B = -.12$ ,  $SE = .06$ ,  $p < .05$ ) (see Table 13). Accordingly, mothers' positive beliefs about shaming predicted less use of rumination for boys ( $t = -2.27$ ,  $SE = .04$ ,  $p < .05$ ). However, mothers' shaming beliefs were

not associated with rumination strategy among middle adolescent girls ( $t = 0.47$ ,  $SE = .04$ ,  $p = .636$ ) (see Table 14, and Figure 16).

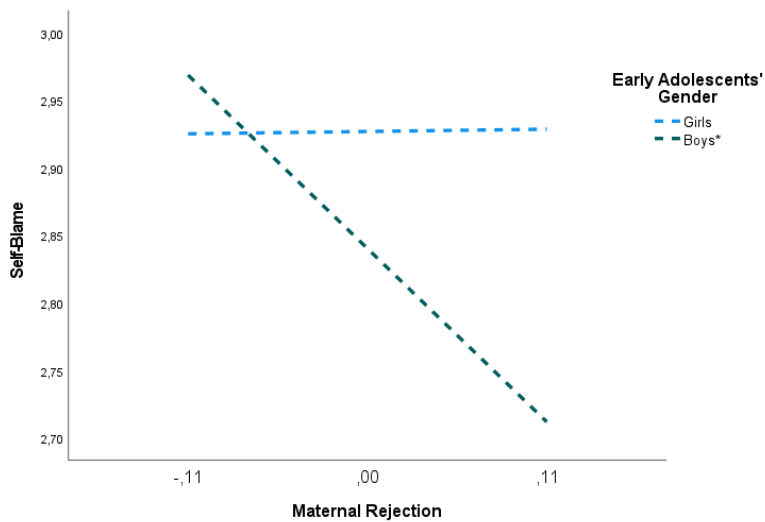


Figure 15. The Interplay between Mothers' Rejection Behaviors and Early Adolescents' Gender for Self-Blame

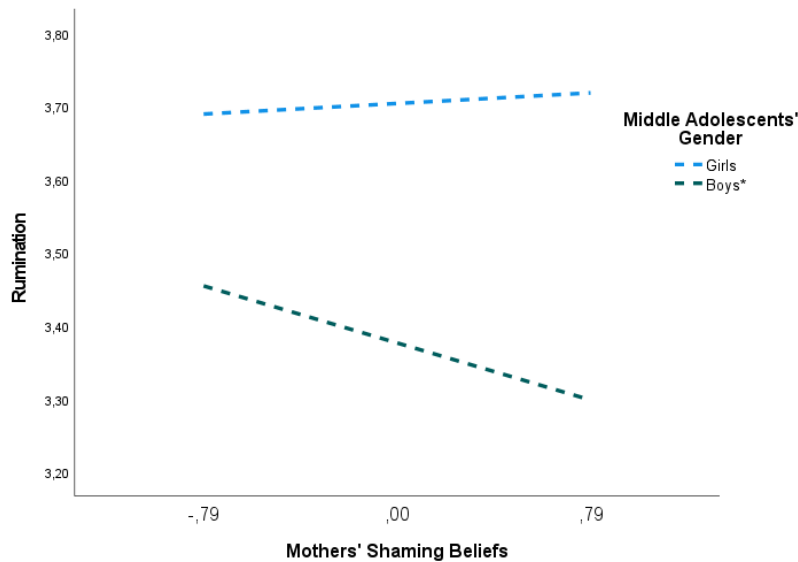


Figure 16. The Interplay between Mothers' Shaming Beliefs and Early Adolescents' Gender for Rumination

### 3.4.3.3. The Results for Moderated Mediation and Mediation Paths

The moderated mediation analyses conducted separately for each school level showed that the moderated mediation index of gender was non-significant for all school levels and emotion regulation strategies (see Table 15). That is, the 95% confidence intervals for the moderated mediation indices which contain zero imply that the tested mediation paths do not differ between boys and girls. Therefore, the gender plots provided by Process Macro Analysis for moderated mediation results were not considered statistically significant even if their confidence interval bands did not include zero points. The indices of adolescents' gender were reported below for each school level and emotion regulation strategy.

At the primary school level, with respect to the *maternal rejection pathways*, moderated mediation indices for self-blame were  $b = -.02$ ,  $SE = .01$ , 95% CI [-.042, .001], for rumination  $b = -.01$ ,  $SE = .01$ , 95% CI [-.037, .012] and  $b = .00$ ,  $SE = .01$ , 95% CI [-.029, .020] for catastrophizing, whereas regarding *psychological control pathways*,  $b = .01$ ,  $SE = .01$ , 95% CI for self-blame: [-.004, .019], for rumination  $b = .00$ ,  $SE = .01$ , 95% CI [-.005, .016] and for catastrophizing  $b = .00$ ,  $SE = .01$ , 95% CI [-.004, .017]. However, although the moderated mediation interaction was not significant, the gender plots for maternal rejection pathways were significant for self-blame, rumination, and catastrophizing. That is, mothers' shaming beliefs positively predicted perceived maternal rejection, which in turn negatively predicted rumination in boys ( $b = -.06$ ,  $SE = .01$ , 95% CI [-.086, -.029]) and girls ( $b = -.04$ ,  $SE = .01$ , 95% CI [-.073, -.021]). However, the same mediation pathways were only significant for self-blame ( $b = -.02$ ,  $SE = .01$ , 95% CI [-.044, -.009]) and catastrophizing ( $b = -.02$ ,  $SE = .01$ , 95% CI [-.042, -.006]) strategies for boys at this school level. Taken together, it can be concluded that the results reveal a trend towards mediation pathways through maternal rejection for self-blame and catastrophizing strategies only in pre-adolescent boys

At the secondary school level, with respect to the *maternal rejection pathways*, moderated mediation indices for self-blame were  $b = -.01$ ,  $SE = .01$ , 95% CI: [-.019, .000], for rumination  $b = -.01$ ,  $SE = .00$ , 95% CI: [-.016, .001] and  $b = .00$ ,  $SE = .00$ , 95% CI for catastrophizing: [-.014, .003] for catastrophizing, whereas for *psychological control pathways*,  $b = .00$ ,  $SE = .00$ , 95% CI for self-blame: [-.002, .013], for rumination  $b = .00$ ,  $SE = .00$ , 95% CI: [-.004, .010] and for catastrophizing  $b = .00$ ,  $SE = .00$ , 95% CI: [-.006, .009].

Table 2. Conditional Indirect Effects of Mothers' Shaming Beliefs on Emotion Regulation Strategies Through Parenting Moderated by Gender.

$X \rightarrow M \rightarrow Y$	Condition	Effect ( <i>B</i> )	m		Psychological Control				
			Boot <i>SE</i>	95% boot CI	Condition	Effect ( <i>B</i> )	Boot <i>SE</i>	95% boot CI	
<b>Primary School</b>									
Shaming Beliefs $\rightarrow$ Parenting $\rightarrow$ Self-Blame	<i>Girls</i>	-.01	.01	[-.02, .01]	<i>Girls</i>	.01	.01	[-.00, .04]	
	<i>Boys</i>	-.02	.01	<b>[-.04, -.01]</b>	<i>Boys</i>	.02	.01	[-.01, .05]	
Index of moderated mediation	<i>Gender</i>	-.02	.01	[-.04, .01]	<i>Gender</i>	.01	.01	[-.00, .02]	
Shaming Beliefs $\rightarrow$ Parenting $\rightarrow$ Rumination	<i>Girls</i>	-.04	.01	<b>[-.07, -.02]</b>	<i>Girls</i>	.01	.01	[-.00, .04]	
	<i>Boys</i>	-.05	.01	<b>[-.09, -.03]</b>	<i>Boys</i>	.02	.01	[-.01, .04]	
Index of moderated mediation	<i>Gender</i>	-.01	.01	[-.04, .01]	<i>Gender</i>	.00	.01	[-.01, .02]	
Shaming Beliefs $\rightarrow$ Parenting $\rightarrow$ Catastrophizing	<i>Girls</i>	-.02	.01	[-.04, .00]	<i>Girls</i>	.02	.01	[-.00, .04]	
	<i>Boys</i>	-.02	.01	<b>[-.04, -.01]</b>	<i>Boys</i>	.02	.01	[-.01, .05]	
Index of moderated mediation	<i>Gender</i>	-.00	.01	[-.03, .02]	<i>Gender</i>	.00	.01	[-.00, .02]	
<b>Secondary School</b>									
Shaming Beliefs $\rightarrow$ Parenting $\rightarrow$ Self-Blame	<i>Girls</i>	.00	.00	[-.01, .01]	<i>Girls</i>	.01	.01	[.00, .03]	
	<i>Boys</i>	-.01	.00	[-.02, -.00]	<i>Boys</i>	.02	.01	[.00, .04]	
Index of moderated mediation	<i>Gender</i>	-.01	.01	[-.02, .00]	<i>Gender</i>	.00	.00	[-.00, .01]	
Shaming Beliefs $\rightarrow$ Parenting $\rightarrow$ Rumination	<i>Girls</i>	-.01	.01	[-.03, -.00]	<i>Girls</i>	.02	.01	[-.00, .03]	
	<i>Boys</i>	-.02	.01	[-.04, -.00]	<i>Boys</i>	.02	.01	[-.00, .04]	
Index of moderated mediation	<i>Gender</i>	-.01	.00	[-.02, .00]	<i>Gender</i>	.00	.00	[-.00, .01]	
Shaming Beliefs $\rightarrow$ Parenting $\rightarrow$ Catastrophizing	<i>Girls</i>	-.00	.00	[-.01, .00]	<i>Girls</i>	.02	.01	[-.00, .03]	
	<i>Boys</i>	-.01	.00	[-.02, .00]	<i>Boys</i>	.02	.01	[-.00, .04]	
Index of moderated mediation	<i>Gender</i>	-.00	.00	[-.01, .00]	<i>Gender</i>	.00	.00	[-.01, .01]	

Table 15 (cont'd). Conditional Indirect Effects of Mothers' Shaming Beliefs on Emotion Regulation Strategies Through Parenting Moderated by Gender.

$X \rightarrow M \rightarrow Y$	Rejection				Psychological Control			
	Condition	Effect (B)	Boot SE	95% boot CI	Condition	Effect (B)	Boot SE	95% boot CI
<b>High School</b>								
Shaming Beliefs $\rightarrow$ Parenting $\rightarrow$ Self-Blame	Girls	-.00	.00	[-.00, .00]	Girls	-.02	.01	[-.04, .00]
	Boys	-.00	.00	[-.01, .01]	Boys	-.01	.01	[-.03, .00]
	Gender	-.00	.00	[-.01, .01]	Gender	.00	.01	[.03, .00]
Shaming Beliefs $\rightarrow$ Parenting $\rightarrow$ Rumination	Girls	-.00	.01	[.01, .01]	Girls	-.02	.01	[-.04, .00]
	Boys	-.00	.01	[-.02, .01]	Boys	-.02	.01	[-.04, .00]
	Gender	-.00	.00	[-.01, .01]	Gender	-.00	.00	[-.01, .01]
Shaming Beliefs $\rightarrow$ Parenting $\rightarrow$ Catastrophizing	Girls	-.00	.00	[-.00, .00]	Girls	-.02	.01	[-.04, .00]
	Boys	-.00	.00	[-.01, .01]	Boys	-.02	.01	[-.04, .00]
	Gender	-.00	.00	[-.01, .01]	Gender	-.00	.00	[-.01, .01]



At the high school level, with respect to the *maternal rejection pathways*, moderated mediation indices for self-blame were  $b = .00$ ,  $SE = .00$ , 95% CI: [-.009, .006], for rumination  $b = .00$ ,  $SE = .00$ , 95% CI: [-.011, .006] and  $b = .00$ ,  $SE = .00$ , 95% CI for catastrophizing: [-.011, .006] for catastrophizing, whereas for *psychological control pathways*,  $b = -.00$ ,  $SE = .01$ , 95% CI for self-blame: [-.006, .015], for rumination  $b = .00$ ,  $SE = .00$ , 95% CI: [-.041, .004] and for catastrophizing  $b = .00$ ,  $SE = .00$ , 95% CI: [-.010, .006].

In summary, the results showed that gender did not moderate the association between mothers' shaming and maladaptive emotion regulation through negative parenting at any school level examined. However, the Model 15 output of Process Macro, which was conducted to test for moderated mediation paths, does not provide results for unconditional mediation effects. For this reason, unconditional (simple) mediation analyses were performed with Process Macro's Model 4 by including gender as covariate to test whether mothers' shaming beliefs predict negative parenting behaviors, and in turn, adolescents' maladaptive emotion regulation. Before interpreting the mediation effects, the results for moderated mediation and unconditional mediation models were compared to see if there was a significant difference in the direct effects analyzed. Therefore, three significant differences were reported between the models. First, at the primary school level, the relationship between maternal rejection behaviors and preadolescents' self-blame strategies was significant in the unconditional mediation model ( $B = -.74$ ,  $SE = .24$ ,  $p < .01$ ), whereas it was not significant in the mediated moderation model. Second, at the primary school level, the relationship between mothers' shaming beliefs and rumination, which previously moderated by gender became non-significant in the unconditional mediation model ( $B = -.03$ ,  $SE = .04$ ,  $p = .495$ ). Lastly, at the secondary school level, the relationship between mothers' rejection behaviors and self-blame strategy, which previously moderated by gender became significant in unconditional model ( $B = -.52$ ,  $SE = .25$ ,  $p < .05$ ). Apart from these, the other direct effects have remained unchanged in terms of significance.

With respect to unconditional mediating effects, the results showed that mothers' positive beliefs about shaming predicted higher level of perceived rejection, and in turn predicted less use of self-blame ( $a_1b_1 = -.02$ ,  $SE = .01$ , 95 % CI [-.033, -.005]), rumination ( $a_1b_1 = -.05$ ,  $SE = .01$ , 95 % CI [-.077, -.026]) and catastrophizing ( $a_1b_1 = -.02$ ,  $SE = .01$ , 95 % CI [-.037, -.007]) at the primary school. However, maternal psychological control did not mediate the relationship between mothers' shaming beliefs and pre-adolescent children's self-blame ( $a_2b_2 = .02$ ,  $SE = .01$ , 95 % CI [-.004, .038]), rumination ( $a_2b_2 = .02$ ,  $SE = .01$ , 95 % CI [-.003, .038]), and catastrophizing ( $a_2b_2 = .02$ ,  $SE = .01$ , 95 % CI [-.005, .041]) strategies.

At the secondary school level, neither the mediating effects of maternal rejection nor psychological control were significant for self-blame ( $a_1b_1 = -.00$ ,  $SE = .00$ , 95 % CI [-.009, .000];  $a_2b_2 = .01$ ,  $SE = .01$ , 95 % CI [-.001, .030]), rumination ( $a_1b_1 = -.02$ ,  $SE = .01$ , 95 % CI [-.035, -.001];  $a_2b_2 = .02$ ,  $SE = .01$ , 95 % CI [-.002, .032]) and catastrophizing ( $a_1b_1 = -.00$ ,  $SE = .00$ , 95 % CI [-.011, -.000];  $a_2b_2 = .02$ ,  $SE = .01$ , 95 % CI [-.000, .033]) strategies. Similarly, at the high school level, neither the mediating effects of maternal rejection nor psychological control were significant for self-blame ( $a_1b_1 = -.00$ ,  $SE = .00$ , 95 % CI [-.004, .003];  $a_2b_2 = -.01$ ,  $SE = .01$ , 95 % CI [-.035, .004]), rumination ( $a_1b_1 = -.00$ ,  $SE = .01$ , 95 % CI [-.016, -.009];  $a_2b_2 = -.02$ ,  $SE = .01$ , 95 % CI [-.038, .004]) and catastrophizing ( $a_1b_1 = -.00$ ,  $SE = .00$ , 95 % CI [-.006, .003];  $a_2b_2 = -.02$ ,  $SE = .01$ , 95 % CI [-.037, .005]) strategies.

### 3.5. Discussion

Adolescence is known as a developmental period when the frequency and the intensity of emotional experiences substantially increase (Power & Casey, 2015). In this sense, how adolescents manage their emotions play a crucial role in their psychological functioning. Specifically, previous studies showed that the maladaptive ways of regulating emotions increase the risk for developing emotional and behavioral problems during adolescence (Silk et al., 2003). Critically, a significant number of studies (see also Study 1) point out that adolescents increasingly use maladaptive cognitive emotion regulation strategies during adolescence (Cracco et al., 2017; Jose & Brown, 2008; te Brinke et al., 2021). Therefore, examining the antecedents of maladaptive regulation strategies is important to identify the risk groups and improve psychological functioning in adolescence. The literature emphasizes the pivotal role of the familial context in the development of emotion regulation in children and adolescents (Eisenberg et al., 1998; Morris et al., 2007). In this regard, the developmental niche framework posits that culturally regulated parenting beliefs organize the context in which socialization occurs through parenting behaviors and therefore predict children's developmental outcomes (Super & Harkness, 1997). In terms of emotional development, growing number of research supports this model by showing that parenting beliefs influence their parenting behaviors (Bayram-Özdemir & Cheah, 2015; Chen et al., 1998) and thus children's emotion regulation skills (Keller & Otto, 2009; Trommsdorff & Rothbaum, 2008). However, previous studies on this topic have mostly focused on infants or young children and neglected adolescents. In addition, studies revealed that mothers in collectivist cultures use shaming to teach moral values to their children and therefore tend to held positive beliefs about shaming (Fung, 1999; 2006; Lieber et al., 2006). However, individualistic values are more adopted by younger generations in Türkiye (Mayer et al., 2012). On this basis, mothers' beliefs about traditional disciplinary strategies such as shaming may predict more negative parenting

behaviors perceived by their (pre)adolescent children in Türkiye. Accordingly, mothers' shaming beliefs may hinder optimal child outcomes through negative parenting behaviors. To the best of our knowledge, this relationship has not been examined in the context of emotion regulation. Therefore, to fill this gap in the literature, Study 2 aims to examine the role of mothers' parenting beliefs about shaming on negative parenting practices (i.e., rejection and psychological control) and adolescents' maladaptive emotion regulation strategies. More specifically, this study tested the mediating role of negative parenting behaviors in the relationship of mothers' shaming beliefs and maladaptive emotion regulation strategies. Furthermore, as findings from previous studies and Study 1 indicate that there are significant differences related to maladaptive emotion regulation at different phases of adolescence (pre-, early and middle adolescence) and across genders, their possible moderator roles are examined in the proposed mediation model. In light of the literature, the results are discussed in this section in the order of the hypotheses.

### **3.5.1. The Results Regarding the Direct Paths**

With respect to the link between mothers' beliefs about shaming and maladaptive emotion regulation strategies (*hypothesis 1*), it was expected that mothers' having more positive attitudes about shaming would be associated with greater use of maladaptive strategies such as self-blame, rumination and catastrophizing in their children. However, this hypothesis is not strongly supported by the present findings. In other words, mothers' beliefs about shaming were largely unrelated to maladaptive ways of regulating emotions across most school levels. Nevertheless, mothers' shaming beliefs predicted catastrophizing positively at secondary school level, but negatively predicted rumination among primary school children. Self-inconsistency theory (Higgins, 1987) suggests that feelings of shame arise when one's current self-representation (actual self) does not match with others' expectations of oneself (others ideal self). Accordingly, individuals feel ashamed if they believe that their behaviors could not meet the standards of significant others. In this sense, from a culturally sensitive perspective, considering how shame is handled in a specific cultural context may explain the non-significant results obtained for the effects of mothers' shaming beliefs in the present study. In contrast to individualistic cultures where shame is seen as a threat to self-esteem, in collectivistic cultures shame is mainly considered an adaptive emotion that encourages individuals to behave according to socially appropriate expressions and to pay attention to such social cues (Markus & Kitayama, 1991; Mascolo et al., 2003). More specifically, in cultures where interpersonal relationships are valued, shame is seen as a desirable consequence of the child's misbehavior and a motivating force to correct socially inappropriate behaviors in children (Fung, 1999; Lieber et al., 2006).

Therefore, previous studies suggest that in cultures where more positive meanings are attributed to shame, parents' shaming strategy is not necessarily associated with negative child outcomes (Cheah et al., 2019; Chiang, 2018; Fung & Lau, 2012; Scharf & Goldner, 2018). Importantly, some researchers suggest that perceived cultural normativity is particularly important for predicting the developmental consequences of parenting behaviors in a given culture (Smetana, 2017). For example, Chiang (2018) found that parental shaming positively predicts psychological distress in adolescence only if perceived cultural normativeness of shaming was low. Although it is difficult to test validity of the cultural normativity hypothesis for the current findings due to no available data in this regard, the fact that parents' beliefs about shaming showed a normal distribution in the sample may seem promising. On this basis, even if adolescents do not approve of the use of shame in child rearing, they may not be directly and negatively affected by the mother's shaming beliefs because they believe that shaming is a normative parenting strategy in Türkiye.

Nevertheless, mothers' shaming predicted two cognitive emotion regulation strategies at different school levels. First, primary school preadolescents whose mothers held more positive beliefs about shaming unexpectedly reported less use of rumination. In parallel with cognitive development, from pre-adolescence onwards, children begin to use various cognitive components of emotional processes (e.g., thoughts, attitudes and expectations) and incorporate them into their internal emotion regulation and coping skills (Gross & Thompson, 2007). In this sense, this age period is important for the child to practice diverse child-directed (internal) and cognitive strategies in addition to the parent-directed (external) and behavioral regulation strategies already in use (Garnefski et al., 2007; Fields & Prinz, 1997). In this context, parents' beliefs about emotions are thought to be influential for children to learn how to manage emotions (Morris et al., 2007). In particular, mothers with positive beliefs about shaming believe that children should regulate their "behaviors" in public and that mothers should take responsibility for children's inappropriate behavior in public (Lieber et al., 2006). Accordingly, these mothers may still play a dominant role in the child's emotion regulation process and encourage the use of behavioral rather than internal cognitive strategies in their primary school-aged children.

Consequently, pre-adolescent children may be less likely to practice cognitive strategies that involve dwelling on thoughts and reasoning, such as rumination. Furthermore, Study 1 and some other studies conducted with similar age groups (e.g., Garnefski et al., 2007) reported that rumination has a high positive correlation with adaptive strategies such as positive reappraisal at primary school level. In this respect, rumination, which is operationally defined in this study, may not be a completely maladaptive strategy, especially at the primary school

level, or at least it may have some similar aspects (e.g., reflective rumination) with adaptive cognitive strategies. From this framework, it can be considered that the association of mothers' beliefs about shaming with less rumination use at the primary school does not completely contradict the hypothesis and is even partially compatible with the hypothesis. Nonetheless, this finding is surprising according to our a priori hypothesis and needs further research. Therefore, it would be useful to test the validity of this view by considering different forms of rumination (i.e. reflection and brooding) in future studies.

Secondly, in line with what was expected, adolescent children whose mothers believe that shame was functional in child rearing were found to use more catastrophizing at the secondary school level. In early adolescence, the developmental gains in cognitive skills such as abstract and hypothetical thinking enable adolescents increasingly to use internal emotion regulation strategies (Steinberg, 2005). At the same time, adolescents become more sensitive to social cues in the environment during this phase of adolescence. Specifically, the peer evaluations and acceptance by the peer groups become central concerns of early adolescents (Blakemore & Mills, 2014). However, early adolescents still spend significant time with their parents and parental factors continue to have a significant influence on adolescents' cognition and emotions (Morris et al., 2007). For this reason, parents' evaluations of adolescents especially in relation to their social environments may affect how adolescents appraise and manage negative situations that arise in their social contexts during this period. As a parental disciplinary strategy, parents who induce shame in their children use several tactics such as comparing their children with peers and evoking fear of social punishment (Yu et al., 2005). In this respect, given that catastrophizing is defined as focusing on the negativity of the event and its worst possible consequences (Chan et al., 2016; Garnefski & Kraaij, 2018), parents who believe in the effectiveness of shaming may make their adolescent children more vulnerable to handle social crises in a catastrophizing way.

In addition to the direct pathways between mothers' shaming beliefs and putatively maladaptive emotion regulation strategies, mothers' positive beliefs about shaming were also expected to predict perceived negative parenting behaviors, namely maternal rejection and psychological control (*hypothesis 2*). In terms of maternal rejection, the results largely supported the hypothesis. That is, mothers' more positive beliefs about shaming were associated with higher levels of maternal rejection in primary and secondary school samples. The present results are consistent with the literature, suggesting that parental beliefs influence parenting behaviors in the socialization process (Super & Harkness, 1997). In this context, grounded theories posit that culture provides parents with a framework for what the characteristics of an ideal child are and how parents can raise culturally fit members of their

society. As a result, parents tend to adjust their parenting strategies according to their cultural orientation in order to achieve culturally defined desirable outcomes in their children (Bornstein, 2012; Darling & Steinberg, 1993; Harkness & Super, 2006). Based on this, parents in collectivist-oriented cultures attribute more positive feelings to the use of shame in child rearing because they believe that shame promotes the development of the interdependent self and serves to maintain social cohesion and morality in their children (Fung et al., 2003; Mascolo et al., 2003). Previous studies showed that parents in Türkiye attach importance to some collectivist values such as maintaining interpersonal relationships and social cohesion (Kağıtçıbaşı, 2002). However, some researchers reported that there are intergenerational differences in individualism and collectivism orientations in Türkiye, with individualistic values being more endorsed by younger generations (Mayer et al., 2012). Thus, traditional disciplinary strategies such as shaming may be perceived as negative parenting by the younger generations in Türkiye. In this sense, the positive association found in this study between mothers' shaming beliefs and perceived maternal rejection behaviors seems to support this view.

On the other hand, in terms of maternal psychological control, the results did not support hypothesis 2. That is, unlike mothers' rejection behaviors, mothers' shaming beliefs were not significantly related to mothers' psychologically controlling behaviors at any school level. Considering that shaming is accepted as a dimension of psychological control in the literature (Barber, 1996; Soenens & Vansteenkiste, 2010), it seems surprising that there was no significant relationship between shaming beliefs and parental psychological control in this study. It is thought that the fact that the psychological interdependence model is the representative family model in Türkiye may have an effect on these results. In such a family model, the development of self-esteem in children is also important and parents are motivated to keep the child psychologically close to family members (Kağıtçıbaşı, 2002). In line with these parental values, parents in Türkiye may believe that instilling a sense of shame in a child is an acceptable strategy to change only inappropriate behaviors of the child, not the child's feelings and thoughts. In fact, parental psychological control refers to manipulative parental behaviors towards the child's inner world such as thoughts, feelings and emotions (Barber & Harmon, 2002). However, the shaming strategy may be aimed at manipulating children's behavior rather than their inner world. Indeed, research shows that in response to children's immoral behavior, parents use shaming to teach children responsibility for their actions, social rules and moral behavior (Fung et al., 2003; Fung, 2006; Mascolo et al., 2003). In this context, shaming may be perceived by (pre-)adolescents as a sign of parental rejection, not psychological control.

Finally, with respect to the link between negative parenting behaviors and maladaptive cognitive emotion regulation strategies, it was expected that (pre-)adolescents with high levels of maternal rejection or psychological control would use more self-blame, rumination and catastrophizing strategies (*hypothesis 3*). Regarding maternal rejection, the results did not support the hypothesis. Surprisingly, in the results where parental rejection significantly predicted maladaptive strategies, the relationship was negative contrary to expectations. Specifically, in primary school, mothers' rejecting behaviors negatively predicted self-blame (only in the unconditional mediation model), rumination, and catastrophizing strategies. In secondary and high school, mothers' rejecting behaviors negatively predicted only rumination, but not self-blame and catastrophizing. Parental acceptance-rejection theory suggests that children who are rejected by their parents become predisposed to evaluate themselves more negatively and also to perceive their experiences or relationships as more threatening or hostile (Rohner et al., 2012). On this theoretical basis, it is quite plausible to expect (pre-)adolescents who are rejected by their mothers to use maladaptive emotion regulation strategies, especially self-blame and catastrophizing. In fact, a bunch of studies supportively reported in adolescent samples that higher maternal rejection predicts emotion regulation difficulties (Saritaş et al., 2013) and greater use of maladaptive emotion regulation strategies (Kallay & Cheie, 2023; Quirk et al., 2015). However, unlike the present study, the lack of maternal warmth behaviors was not included in the rejection score in these studies. In only two of these studies, maternal warmth behaviors were examined separately and no significant relationship was found between emotion regulation difficulties (Saritaş et al., 2013) or maladaptive strategies (Kallay & Cheie, 2023). Some researchers argue that parental acceptance and rejection may be separate dimensions rather than two opposite aspects of a single continuum. As a result, lack of parental warmth is not necessarily accompanied by other rejection behaviors such as neglect, hostility or undifferentiated rejection (Putnick et al., 2012). Accordingly, it is conceivable that maternal warmth may have different effects than rejection, especially on the cognitive regulation of emotions. To test this possibility, posteriori multiple regression analyses were conducted by including maternal warmth, rejection (without lack of warmth) and other study variables in the model when predicting maladaptive cognitive strategies. Indeed, the results revealed that mothers' rejecting behaviors positively predicted self-blame and catastrophizing in primary and secondary school, but these associations were no longer significant in high school. In addition, although the direction of the relationships was positive, maternal rejection did not predict rumination at any school level. Noteworthy, higher levels of maternal warmth were also associated with greater use of self-blame, rumination and catastrophizing at all three school levels. At first glance, this result seems to contradict previous studies (Boullion et al., 2023; Gan et al., 2022) that found a positive relationship

between maternal warmth and adolescents' emotion regulation skills. However, a considerable number of studies have found that unlike maternal rejection behaviors, warmth is not related to adolescents' emotion regulation (e.g., Saritaş et al., 2013; Kallay & Cheie, 2023). This suggests that rejection and lack of warmth may not function similarly, at least in terms of emotion regulation development. Specifically, each of the emotion regulation strategies examined in this study requires the (pre-)adolescents to confront the negative event in some way and to analyze this negative situation. In this sense, regardless of the adaptiveness of emotion regulation strategies, it seems possible that mothers' accepting behaviors towards their (pre-)adolescent children facilitate children's access to these cognitive strategies that require thinking about the negative event.

When Hypothesis 3 was tested for psychological control, the results were found to be consistent with the expectations and the previous studies on emotion regulation (e.g., Beliveau et al., 2023; Lin et al., 2023). Namely, higher levels of maternal psychological control predicted greater use of self-blame, rumination and catastrophizing in all three school levels. Researchers argue that parental psychological control leads to the child's basic socio-emotional needs, such as autonomy, relatedness and competence, not being met by the parent, thus undermining the child's adaptive psychological functioning (Soenens & Vansteenkiste, 2010). Specifically, the mothers with high psychological control try to impose their own expectations and wishes by intervening in children's cognitive and affective processes (Barber, 1994). To this end, these mothers typically resort to various parental tactics, such as placing the blame on the child, threatening to withdraw parental love from the child, and inducing feelings of guilt (Barber, 1996). In this context, mothers' psychological control tactics may predispose (pre)adolescents to adopt emotion regulation strategies that involve reflecting on events in a maladaptive way and consequently making more negative attributions to events and themselves.

### **3.5.2. The Results Regarding the Indirect Paths**

Based on the developmental niche framework (Super & Harkness, 1997), the mediating role of negative parenting behaviors in the relationship between maternal beliefs about shaming and (pre-)adolescents' maladaptive emotion regulation strategies was examined. In this regard, mothers with more positive beliefs about the use of shame in child rearing are expected to be perceived as more rejecting and psychologically controlling by their children, which in turn predicts greater use of self-blame, rumination, and catastrophizing in (pre-)adolescents (*hypothesis 4*). The results showed that the mediating role of parenting was statistically meaningful only for maternal rejection and primary school level. Accordingly, in line with



expectations, pre-adolescents rated their mothers with positive beliefs about shaming as lacking warmth, affection and care, as well as more hostile and punitive. However, later on, the absence of affectionate behaviors and the presence of indifferent and/or hostile behaviors of the mothers towards their preadolescent children were negatively associated with putatively maladaptive cognitive emotion regulation strategies. Since the direction of the link between maternal rejection and maladaptive regulation strategies was unexpectedly negative, hypothesis 4 was not supported.

Pre-adolescence is considered as an important developmental period for the acquisition of more complex cognitive coping and regulation skills (Garnefski et al., 2007; Stavish & Lengua, 2023). That is, research indicates that during this period, primary school children begin to use less external regulation and coping strategies (e.g., seeking adult support) and more internal cognitive strategies, which increase with age (Fields & Prinz, 1997). However, children build their regulatory repertoire remarkably on the basis of their parents' reactions to their negative emotions. In this sense, parents' beliefs about emotions influence the development of children's emotion regulation skills through parents' emotion socialization behaviors in response to children's emotional arousal. More specifically, certain beliefs about emotions increase parents' dismissing behaviors towards their children's emotions. In this context, parents' negative and unresponsive reactions in response to children's emotional arousal lead to the child avoiding their negative feelings rather than trying to analyze and understand them (Eisenberg et al., 1997; Morris et al., 2007). On this basis, mothers' rejecting behaviors may also reduce the use of maladaptive cognitive emotion regulation strategies because these strategies require children to cognitively confront and analyze their negative experiences. In fact, literature suggests that interdependent-oriented mothers are motivated to teach children to suppress the expression of negative emotions, as these emotions are seen as a threat to maintaining social cohesion (Chen, 1995; Markus & Kitayama, 1991; Parker et al., 2012). Accordingly, in cultures where collectivist emotions such as shame are valued, mothers tend to show more rejecting reactions to their children's expression of negative emotions such as anger (Cole et al., 2006). Therefore, pre-adolescents whose emotions are rejected by their mothers may be more likely to adopt avoidance-oriented maladaptive strategies to manage their negative emotions than thought-oriented strategies such as self-blame, rumination, and catastrophizing.

### **3.5.3. The Results Regarding Moderation Paths**

Consistent with previous studies (Rood et al., 2009; Duarte et al., 2015; Webb et al., 2012; Zagaria et al., 2023), the results of Study 1 revealed that girls tended to use maladaptive

strategies more than boys. This suggests that girls and boys may be influenced differently by parenting cognitions and practices. In other words, the effectiveness of parenting factors in predicting maladaptive cognitive emotion regulation strategies may differ between genders (Morris et al., 2007). However, existing findings yielded mixed results for the moderating role of gender. Namely, some studies demonstrated that adolescent boys are more sensitive to parental influences in emotional socialization (Rueth et al., 2017), whereas others revealed that adolescent girls are more susceptible to be emotionally influenced by negative parenting (Chaplin et al., 2022). Along with these, several studies reported no significant moderating role of adolescent's gender in the relationship between negative parenting and emotion regulation skills (Beliveau et al., 2023; Saritaş et al., 2013). Because of these inconsistent findings in the literature, the moderator role of gender was explanatory tested in predicting effects of mothers' beliefs about shaming and negative parenting behaviors (*hypothesis 5*).

Accordingly, the results demonstrated three significant interaction effects for gender at different school levels. Two of these significant interactions were found between mothers' beliefs about shaming and (pre-)adolescents' rumination. That is, mothers' beliefs about shaming were associated with lower use of rumination only for girls in primary school, whereas in high school, the same pathway was significant only for boys. In this regard, the present findings suggest that gender-differentiated parenting effects may change direction according to developmental phases. As mentioned before, mothers who believe that using shame in child rearing is an effective strategy mostly use shaming strategy to draw the child's attention to immoral behavior and to teach culturally moral behavior (Fung, 2006; Mascolo et al., 2003). In this line of reasoning, even if shaming increased the child's attention to the negative event, it may serve to draw the child's attention to his/her behaviors rather than his/her emotions and thoughts about the event. Therefore, mothers' shaming beliefs may reduce the use of regulation strategies which require focusing on thoughts and feelings such as rumination. However, gender and developmental phase differences found for this relationship give rise to thought that the reducing effect of shaming may be valid only at moderate levels of rumination. According to interaction plots, regardless of mothers' shaming beliefs, boys in primary school reported low levels of rumination (from "rarely" to "sometimes"), while girls in high school reported relatively high levels of rumination (close to "usually"). That is, since rumination was already used at low levels by boys in primary school, mothers' beliefs about shaming did not have a reducing effect on it, but rather rumination showed an increasing trend, perhaps because shaming drew the child's attention to the negative event. On the other hand, at the high school level, girls may show readiness to use rumination in response to negative events, and thus may be more resistant to the aforementioned possible effects of shaming beliefs.

Nevertheless, it should be noted that mothers' beliefs about shaming were not found to be associated with rumination for any gender at the secondary school level. For this reason, future longitudinal research is needed in order to gain further insight into the effect of mothers' shaming beliefs on cognitive emotion regulation strategies across genders and developmental phases.

The last significant interaction effect for gender was found for the relationship between maternal rejection and self-blame strategy in secondary school. That is, mothers' rejecting behaviors predicted lower use of self-blame only for boys. Recently, Stavish and Lengua (2023) found that lower levels of maternal warmth and higher level of negativity predicted increase in avoidant coping among preadolescents. In addition, some researchers suggest that boys in early adolescence may be more sensitive to maternal behaviors with respect to emotion regulation (Rueth et al., 2017). Taken together, as a possible explanation, in response to uncontrollable stressors such as maternal rejection, boys in secondary school may adopt more avoidant strategies to reduce their psychological burden. Consequently, adolescent boys may be less likely to use emotion regulation strategies such as self-blame, which entails taking responsibility for negative events.

Apart from these, the results showed that the moderating role of (pre-)adolescents' gender in the mediation models (shaming beliefs → negative parenting → maladaptive emotion regulation strategies) were not significant for any school levels. Nevertheless, the gender plots drawn for mediation models for self-blame and catastrophizing strategies suggest a trend towards moderated mediation effect for maternal rejection pathway in the primary school. Accordingly, the preadolescent boys may perceive differently maternal related factors and thus show higher sensitivity to mothers' beliefs and behaviors in the socialization process at least in the primary school years. Although the present results were not statistically meaningful for the moderated mediation effect, the plots that significantly differ for boys and girls may provide partial support for the previous research examining parenting differentiated by gender (Ortega et al., 2021; Root & Denham, 2010; Shek, 2008). Therefore, in future studies, it is thought that examining the risk and promotive factors associated with mothers by considering the gender of (pre-)adolescents will be useful and will contribute to the literature on differential effects of parenting depending on children's gender.

Finally, with respect to moderating role of developmental phases, since shaming is likely perceived more negatively by older adolescents (Helwig et al., 2014; Smetana et al., 2021), mothers' beliefs about shaming and thereby negative parenting behaviors are expected to be more detrimental in later phases of adolescence (*hypothesis 6*). However, mothers' beliefs

about shaming were associated with perceived maternal rejection behaviors in primary and secondary schools but not in high school level. Moreover, the mediating role of maternal rejection in the relationship between mothers' beliefs about shaming and maladaptive emotion regulation strategies was only significant for preadolescents in primary school. In this sense, the present results did not support the hypothesis. There are two possible explanations that could account for the unexpected results in this regard. Firstly, the mothers in the current study were asked about their views on shaming without specifying the age group of the children. That is, the mothers may believe that the use of shaming is only an effective strategy to discipline the younger children. Indeed, Fung (2006) stated that the parents in collectivist cultures such as China have more positive attitudes regarding shaming strategy to teach moral values to their children but parents usually stop shaming their adolescent children in public. In this line of reasoning, since these mothers are less likely to use shaming on their adolescent children in high school, mothers' shaming beliefs did not predict negative parenting behaviors at this school level. Secondly, the prior research has emphasized the importance of perceived cultural normativeness in predicting effects of parents' discipline strategies on children's psychological well-being (Chiang, 2018; Smetana, 2017). In this sense, the cultural meaning of shame can take time to be understood and internalized by children. Therefore, parental shaming might be perceived by older adolescents as more normative in Turkish culture. As a result, the oldest group in the current study might internalize the cultural values more and attribute less negative meaning to these values such as shaming.

## CHAPTER 4

### GENERAL DISCUSSION

The current thesis mainly aimed to investigate cognitive emotion regulation strategies, which have been associated with psychopathologies such as depression and anxiety in previous studies (Garnefski et al., 2005; Garnefski & Kraaij, 2006), at different phases of adolescence. To this end, two studies were conducted with a representative sample from Türkiye. First, *Study 1* examined differences in the use of cognitive emotion regulation strategies, namely self-blame, rumination, catastrophizing, positive refocusing and positive reappraisal across three school levels (i.e., primary, secondary and high school) and between genders. In addition, the adaptiveness of these strategies was tested for three school levels and genders by examining their relationship with internalizing and externalizing problems. Then, *Study 2* focused on possible maternal antecedents of putatively maladaptive cognitive emotion regulation strategies (i.e., self-blame, rumination, and catastrophizing). In this scope, the role of mothers' beliefs about shaming and perceived negative parenting behaviors were examined in relation to (pre)adolescents' maladaptive cognitive emotion regulation strategies at different school levels. Specifically, the mediating role of negative parenting behaviors, namely maternal rejection and psychological control, and moderating role of gender were tested in the link between mothers' shaming beliefs and maladaptive cognitive emotion regulation strategies.

In *Study 1*, firstly, a significant increase was found in the use of almost all emotion regulation strategies (except for positive refocusing) examined in this thesis from preadolescence (i.e., primary school) to middle adolescence (i.e., high school). Previous research has emphasized that brain regions involved in emotion regulation, such as the prefrontal cortex, mature during adolescence, and consequently various cognitive gains in abstract reasoning and effortful control enable adolescents to use increasingly cognitive resources to manage their emotions (Garnefski et al., 2007; McRae et al., 2012; Sabatier et al., 2017). In this sense, it can be said that the present findings provide empirical support for the literature pointing to the adolescence period in terms of remarkable improvements in internal emotion regulation skills (Hollenstein & Loughheed, 2013). However, the present results also suggest that some gender-specific trends emerge in the use of cognitive strategies, especially at higher school levels. That is, the

adolescent girls in high school were found to use putatively maladaptive cognitive emotion regulation strategies more, but positive refocusing as an adaptive strategy less, compared to boys at the same school level. According to gender role theories, women are thought to be more vulnerable to emotional experiences than men. In support of this, prior research has shown that women tend to express and reflect on their emotions, whereas men tend to suppress or avoid them (Nolen-Hoeksema, 2012). Consequently, social and emotion-focused regulation strategies are mainly used by women, while emotion-concealing and avoidance strategies are predominantly used by men (Zimmerman & Iwanski, 2014). Rumination, self-blame and catastrophizing largely involve dwelling on the negative event and focusing on its affective aspects. Therefore, it can be said that the maladaptive strategies examined in this thesis may be stereotypically appropriate for the female gender. In contrast, positive refocusing as an adaptive strategy involves shifting attention away from the emotional aspects of the negative event. As a result, men may be more motivated to use positive refocusing in accordance with their gender roles. Noteworthy, the findings of this thesis point to the adolescence period for the emergence of these stereotypical tendencies in the use of cognitive emotion regulation strategies. Furthermore, the results suggest that the female gender is a risk group for managing emotions more maladaptively and less adaptively during adolescence.

Secondly, despite gender differences in the use of cognitive emotion regulation strategies, the results suggest that adaptiveness of emotion regulation strategies does not vary between genders. That is, the cognitive emotion regulation strategies in this thesis similarly predict internalizing and externalizing problems in boys and girls at each school level. Accordingly, positive reappraisal in primary school and positive refocusing in secondary and high school were found as promotive factors for internalizing problems. On the other hand, self-blame and catastrophizing strategies emerged as risk factors for internalizing and/or externalizing problems in secondary and high school. However, putatively maladaptive strategies were not associated with either problem behavior in primary school. When these results are taken together, it can be concluded that the adaptiveness of emotion regulation strategies may differ according to developmental phases. Notably, problem behaviors were associated with more cognitive emotion regulation strategies in early and middle phases of adolescence, and cognitive strategies also explained more variance in these phases, especially on internalizing problems. As a possible explanation, some researchers argue that emotion regulation strategies which require more advanced cognitive skills may be less available for preadolescents who are not yet fully cognitively competent (Zimmer-Gembeck, & Skinner, 2016). Alternatively, the others suggest that individuals' ways of appraising and managing stressful events may become conditioned over time to respond readily to stressful situations (Watkins & Nolen-Hoeksema, 2014).

In fact, prior studies showed that children develop stability in their cognitive attributes in response to negative events during adolescence period (Cole et al., 2008). In a similar vein, developing stability in the use of cognitive emotion regulation strategies may be important for predicting the effectiveness of these strategies on psychological problems (Rood et al., 2009). In this sense, even though the present results could not specifically replicate previous findings reported for rumination (Rood et al., 2009) and reappraisal (Compas et al., 2017), they appear to be consistent with the literature showing that the effectiveness of cognitive emotion regulation strategies significantly increase with age.

Then, in Study 2, it was found that mothers with more positive beliefs about shaming were perceived as more rejecting by their children in primary and secondary school, but not in high school. However, mothers' shaming beliefs were not related to perceived maternal psychological control at any school level. In cultures where collectivist values are emphasized, parents encourage in their children the behaviors that serve to maintain social relationships and order. On the other hand, they consider behaviors that have the potential to harm social cohesion as immoral (Mascolo et al., 2003). In line with these parenting goals, parents with collectivistic orientation likely have more positive attitudes towards disciplinary strategies involving other-oriented emotions such as shame to ensure culturally defined morality in their children (Fung, 2006; Wu et al., 2002). Kağıtçıbaşı (2002) defined the typical family model in Türkiye as emotional/psychological interdependence oriented. In this family model, parents tend to encourage the development of autonomy and self-reliance in their children so that they can adapt to the changing living conditions due to urbanization and industrialization. However, this autonomy that parents desire in their children implies achieving independence only in a material sense. In contrast, parents want their children to maintain psychological and emotional dependence with other family members. Therefore, parents are likely to adjust their disciplinary strategies in line with their "autonomy with relatedness" parenting goals. More specifically, parents who favor the use of shame in child rearing may only resort to shaming in response to children's inappropriate behaviors that are potentially damaging to social cohesion. However, they may not use shaming as a disciplinary strategy that attack to children's inner world such as emotions, beliefs and thoughts, possibly because it conflicts with both their autonomy and psychological commitment goals. Indeed, the mothers' shaming beliefs scale used in this thesis largely includes statements about the use of shaming to teach children rules and appropriate behavior (e.g., "Çocukları utandırmak, onların nasıl davranması gerektiğini öğrenmelerine yardımcı olur"). Consequently, it is possible that the (pre-)adolescents in this thesis felt rejected (not accepted) but not psychologically controlled by their mothers when their mothers shamed them for their inappropriate behaviors.

In the literature, shaming is typically conceptualized as one dimension of psychological control (Nelson et al., 2013; Soenens & Vansteenkiste, 2010). However, the present findings suggest that there may be cultural differences in the implementation and interpretation of disciplinary strategies such as shaming. Indeed, the literature suggest that the meaning and function of shame and shaming change depending on the cultural values (Fung, 2006; Fung & Lau, 2012; Mascolo et al., 2003; Trommsdorff & Rothbaum, 2008; Wu et al., 2002). Therefore, it can be said that it would be useful for researchers to consider parental motivations and the extent of shaming in the context of socialization in order to predict the outcomes related to parental shaming.

Secondly, the findings of Study 2 indicated that mothers' higher rejection behaviors predicted less frequent use of all three maladaptive cognitive emotion regulation strategies in primary school and rumination in secondary and high school. However, mothers' higher psychological control behaviors were associated with more frequent use of all three maladaptive strategies at all three school levels. Regarding maternal rejection, although the present results seem to contradict previous studies on emotion regulation (Kallay & Cheie, 2023; Quirk et al., 2015; Sarıtaş et al., 2013), the cognitively oriented nature of emotion regulation strategies examined in this thesis may make sense of these unexpected findings. Even if they are ineffective ways of managing emotions, maladaptive cognitive regulation strategies require individuals to think about the negative event they experience. In this sense, it can be thought that (pre-)adolescents who use these strategies try to analyze their emotions in some way. In this context, mothers' higher levels of acceptance behaviors may facilitate their children's analysis of their emotions, regardless of the effectiveness of the regulation strategies used. In contrast, the absence of affectionate behaviors and the presence of indifferent and/or hostile behaviors of the mothers may lead them to model for their children how they deal with their negative emotions. Therefore, (pre-)adolescents with higher levels of maternal rejection may avoid their feelings rather than somehow confront them. Moreover, based on the present results, this may be particularly evident during the primary school years, when preadolescent children are trying to establish their own internal emotion regulation repertoire. On the other hand, unlike maternal rejection, psychological control may further influence how children cognitively interpret or analyze the negative event. That is, mothers' manipulative and critical behavior towards (pre-)adolescents' thoughts and feelings may predispose them to engage in maladaptive thinking processes such as self-blame, rumination and catastrophizing. In this sense, it can be concluded that the results of this thesis provide researchers with an insight that negative parenting may have different effects depending on the characteristics of emotion regulation strategies and maternal behaviors.



Finally, the Study 2 tested moderating role of gender in the relationship between parental factors and (pre-)adolescents' maladaptive emotion regulation strategies. Previous studies on the differential gender effects of parenting on developmental outcomes have yielded mixed findings. Some researchers have found that parents tend to adjust their parenting behaviors according to child's gender (Eisenberg et al., 1998; Ortega et al., 2021; Shek, 2008). Possibly related to this, some studies have found that one gender is more sensitive to the effects of parenting behaviors than the other (Chaplin et al., 2023; Rueth et al., 2023). However, the results are inconsistent regarding which gender is more sensitive. Furthermore, a number of studies have revealed non-significant interaction effects of gender in predicting the relationship between negative parenting and emotion regulation in adolescence (Beliveau et al., 2023; Sarıtaş et al., 2013). The findings in this thesis extend the literature by suggesting that the hypothesis about differential effect of gender on this issue may be even more complicated. That is, the present results suggest that the specificity of gender in relation to parental factors may change depending on developmental phases and emotion regulation strategies examined. For example, mothers' positive beliefs about shaming were associated with lower levels of rumination for girls in primary school, but the similar results were found for boys at high school level. Based on these results, although it can be concluded that boys and girls at different developmental levels may show differential sensitivity to parent-related variables, this link needs to be replicated in future studies due to the exploratory nature of this hypothesis in the current thesis.

#### **4.1. Limitations and Future Directions**

It would be appropriate to interpret the findings of the current thesis considering its limitations. Firstly, the present results were retrieved from cross-sectional data. Therefore, the analyses for developmental phases are based on different participants at each developmental phase. One of the major drawbacks of studying differences in developmental phases using a cross-sectional research design is the possibility that the results obtained are due to different individual factors and not to the developmental level. Although the large sample size in the current thesis is thought to tolerate mostly random errors due to individual factors, it should be noted that differences in developmental phases still may be affected by more systematic errors such as cohort effect. Furthermore, concurrent data obtained from the cross-section design limits interpretations regarding temporal and prospective predictions. For example, in addition to predicting externalizing and internalizing problems from cognitive emotion regulation strategies, it is possible that the use of emotion regulation strategies may also change over time depending on these problem behaviors. For this reason, it is recommended to test the proposed relationships examined in this thesis longitudinally in future studies.

Secondly, the gender variable is operationally defined as biological sex in this thesis. However, studies have shown that gender role identity may be particularly important in predicting adolescents' emotion regulation strategies in response to stressors. For example, Cox and colleagues (2010) found that identification with feminine gender role is more strongly associated with the use of rumination than biological sex. Given the literature suggesting increased pressure to conform to gender roles during adolescence (Broderick & Korteland, 2002; Hill & Lynch, 1983), gender role identity may explain the results regarding differences between boys and girls in emotion regulation strategies and the shift towards maladaptive emotion regulation strategies observed in adolescent girls. Therefore, in order to gain a deeper understanding of gender and developmental phase differences in cognitive emotion regulation strategies in the current thesis, it seems useful for future studies to take into account gender role identities in addition to biological sex.

Thirdly, the mothers reported their beliefs about shaming in general without specifying the gender and developmental phase of the child. However, mothers may have different attitudes towards shaming children at different phases of development or gender. If mothers hold different beliefs based on these, they are more likely to adjust their parenting behaviors accordingly. In other words, the relationship between parenting beliefs about disciplinary strategies and behaviors may be vulnerable to be influenced by parents' expectations about the developmental level and gender of the child. Therefore, it is believed that future studies on this subject will provide a more accurate prediction of the relationship between parenting beliefs and behaviors by providing whether parenting beliefs vary according to the possible individual characteristics of the child.

Finally, mothers' rejection behaviors were identified as a composite score of lack of warmth and other rejection behaviors, including hostility, neglect and undifferentiated rejection, as suggested by parental acceptance rejection theory (Rohner et al., 2012). However, some researchers argue that parental warmth and rejection may not be opposite constructs on a continuum (Putnick et al., 2012). In fact, previous studies on emotion regulation reported different patterns for parental warmth and rejection (Kallay & Cheie, 2023; Sarıtaş et al., 2013). In line of this research, the post hoc analyses utilized to understand unexpected findings for maternal rejection in the Study 2 showed that both maternal warmth and rejection scores (i.e., not including warmth dimension) positively predicted maladaptive strategies at some school levels. Therefore, as a suggestion for future studies, examining the role of parental warmth and rejection in relation to emotion regulation separately may provide a better understanding of their differential impact on developmental outcomes.

## **4.2. Strengths and Contributions to the Literature**

Along with some weaknesses, the present thesis has many strengths. Firstly, the data are drawn from a nationally representative sample of Türkiye. Namely, a total of 180 schools from 61 provinces in different regions of Türkiye were visited and data were collected. This enabled the participants from diverse cultural and socio-economic backgrounds to be included in the present thesis. Therefore, it can be said that the generalizability of the findings to the Turkish population is high. Secondly, the questionnaires in this thesis were not based solely on mother or child reports, some were reported by the mother and some by the child, depending on the nature of the concepts measured. That is, the variables based on thought processes that cannot be directly observed were collected as self-reports (e.g., parenting beliefs and cognitive emotion regulation strategies), whereas the variables that are relatively easy to observe and may be sensitive to social desirability (e.g., negative parenting behaviors and problem behaviors) were collected as mother or child reports. In this way, we tried to reduce distortion of the explained variance primarily due to likelihood of shared method effects. Lastly, one of the strengths of this thesis can be considered to examine the possible moderating role of gender and adolescence on developmental outcomes. As mentioned before, previous studies on cognitive emotion regulation strategies in adolescence mostly focused on the adolescents between the ages of 12-18 with a holistic approach (e.g., Rood et al., 2009). However, as adolescents experience rapid changes in almost all areas of development, including physical, cognitive and socio-emotional, unique developmental patterns in emotion regulation can be observed across the phases of adolescence (e.g., Cracco et al., 2017; Silvers et al., 2012; Sanchis-Sanchis et al., 2020). In addition, gender roles become more salient construct for adolescents (Hill & Lynch, 1983), and perhaps this is why gender differences are often reported in studies on emotion regulation (Nolen-Hoeksema, 2012). Therefore, it is thought that examining cognitive emotion regulation strategies by taking into account the developmental phases and gender of adolescents strengthens the validity of the findings.

In addition to its methodological strengths, the current thesis is believed to contribute the literature in several ways. Firstly, within the scope of this thesis, cognitive emotion regulation strategies were examined from a developmental perspective. To this end, in addition to examining the use of cognitive strategies at different developmental phases of adolescence and between genders, the possible maternal antecedents of maladaptive cognitive emotion regulation strategies were investigated. In this sense, previous studies on cognitive emotion regulation strategies in adolescence have mainly focused on rumination and reappraisal strategies. In contrast, relatively less is known about developments of putatively other maladaptive strategies such as self-blame and catastrophizing as an emotion regulation

strategy. Therefore, the investigating developmental patterns in all cognitive strategies previously associated with problem behaviors (Garnefski et al., 2005; Garnefski & Kraaij, 2006) as well as their unique contributions is thought to provide deeper insight into these problems during adolescence.

Secondly, previous research examining parental beliefs about emotions in relation to parenting behaviors and child's emotional development largely focused on the mothers with younger children (e.g., Cole et al., 2006; Dunsmore & Kan, 2001; Halberstadt et al., 2013). However, robust evidence suggests that parents continue to influence the emotion regulation of their adolescent children (Morris et al., 2007; 2017). In this sense, the current study contributes to fill this gap in the literature by examining the effects of mothers' parenting beliefs about emotions on parenting behaviors and cognitive emotion regulation strategies in an (pre-)adolescent sample. Importantly, the current thesis extends the literature by focusing on particularly mothers' beliefs about the use of shame in child-rearing. Shame is conceptualized and valued differently by parents depending on cultural orientations (Mascolo et al., 2003; Trommsdorff & Rothbaum, 2008). Accordingly, parents with more collectivistic values more likely believe that the use of shame is functional in child rearing to teach moral behaviors and maintain social cohesion (Fung, 1999). In consistent with this cultural orientation, research has shown that parents in Türkiye sometimes resort to shaming their children in order to raise a child with moral behavior (Cho et al., 2021). However, along with urbanization and industrialization, several changes in cultural values and family patterns are observed in Türkiye (Kağıtçıbaşı, 2002). In particular, adolescents tend to favor individualistic values and endorse independently oriented family models more than their parents (Mayer et al., 2012). In this context, testing the possible effects of mothers' beliefs about shaming on adolescent children's parenting perceptions and emotion regulation strategies in the current study is considered to be a strength of this study and also a unique contribution to the literature.

#### **4.3. Conclusion and Practical Implications**

The physical and hormonal changes related to puberty and the more demanding tasks in social and academic domains lead to remarkable changes in adolescents' emotional experiences (Casey et al., 2008; Gross, 2013). However, these challenges come with significant cognitive and neurological advances that allow individuals to develop and apply more complex internal regulation strategies (Hollenstein & Loughheed, 2013; McRae et al., 2012). In this sense, the acquisition of effective ways of emotion regulation is not only important for psychosocial functioning, but is also considered as a critical part of development (Aldao et al., 2010).

However, studies have demonstrated that adolescents' cognitive processes are especially sensitive to socioemotional stimuli and stressors (Casey et al., 2008; Spear, 2000). As a result, along with significant developmental gains such as internal and cognitive based emotion regulation strategies, adolescence is recognized as a time for increased risk of maladaptive shift in emotion regulation (Cracco et al., 2017) and developing various problem behaviors (Power & Casey, 2015). Therefore, examining the use and effectiveness of cognitive emotion regulation strategies in different developmental phases of adolescence and investigating antecedents of maladaptive emotion regulation strategies is valuable in understanding and contributing to the psychosocial development of adolescents. For this purpose, two different studies were conducted in the present thesis using a representative sample from Türkiye. *Study 1* aimed to investigate possible developmental (pre-adolescence, early and middle adolescence) and gender differences in the use and effectiveness of five emotion regulation strategies (self-blame, rumination, catastrophizing, positive refocusing, and reappraisal). Then, *Study 2* aimed to examine the mediating link between mothers' beliefs about shaming and maladaptive emotion regulation strategies through negative parenting behaviors.

The results of these two studies revealed a number of promotive and risk factors that could be considered in future intervention programs to contribute the psychological functioning of (pre-)adolescents. In this respect, three possible practical implications can be drawn on the basis of the present findings. Firstly, the results showed that maladaptive cognitive emotion regulation increase but adaptive ones tend to decrease in secondary and high school levels. This pattern is particularly salient for girls. Considering the significant relationship between emotion regulation strategies and problem behaviors at these school levels, there is a need for intervention programs in schools that promote adolescents to use more adaptive cognitive emotion regulation strategies. Secondly, the results showed that a considerable number of mothers in Türkiye have positive attitudes to use of shaming in child rearing. Although the association of mothers' positive beliefs about shaming with maladaptive regulation strategies were not significant for most cases, shaming beliefs positively predicted greater use of catastrophizing in secondary school. Moreover, the mothers' positive beliefs about shaming were related to higher levels of maternal rejection in primary and secondary schools. Therefore, educational programs can be implemented for parents about the possible negative effects of shaming on their school-age children. Lastly, the results showed that mothers' psychological control positively predict all maladaptive strategies of (pre)adolescents at three school levels. This finding highlights the need to inform parents about psychological control and its negative effects on developmental outcomes, and perhaps to develop intervention programs that involve the adolescent and mother together.

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## APPENDICES

### A. APPROVAL OF THE METU HUMAN SUBJECTS ETHICS COMMITTEE

UYGULAMALI ETİK ARAŞTIRMA MERKEZİ  
APPLIED ETHICS RESEARCH CENTER

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ORTA DOĞU TEKNİK ÜNİVERSİTESİ  
MIDDLE EAST TECHNICAL UNIVERSITY

Sayı: 28620816 /

09 ARALIK 2021

Konu : Değerlendirme Sonucu

Gönderen: ODTÜ İnsan Araştırmaları Etik Kurulu (İAEK)

İlgi : İnsan Araştırmaları Etik Kurulu Başvurusu

Sayın Prof.Dr. Sibel KAZAK BERUMENT ve Dr.Öğr.Üyesi Başak Şahin  
AÇAR

“Ebeveynlik Tutumlarının ve Ebeveyn-Çocuk İletişim Özelliklerinin Çocuk ve Ergen Gelişimine Etkisi” başlıklı araştırmanız İnsan Araştırmaları Etik Kurulu tarafından uygun görülmüş ve 498-ODTU-2021 protokol numarası ile onaylanmıştır.

Saygılarımızla bilgilerinize sunarız.

Prof.Dr. Mine MİSİRLİSOY  
İAEK Başkan



## B. APPROVAL OF MINISTRY OF EDUCATION



T.C.  
MİLLÎ EĞİTİM BAKANLIĞI  
Strateji Geliştirme Başkanlığı

Sayı : E-49614598-605.01-36250976  
Konu : Araştırma Uygulama İzni

04.11.2021

### DAĞITIM YERLERİNE

- İlgi: a) Orta Doğu Teknik Üniversitesi Rektörlüğünün 04/08/2021 tarihli ve 48502539-604.01.03-E.8 sayılı yazısı.  
b) Millî Eğitim Bakanlığının 21/01/2020 tarihli ve 2020/2 Nolu Araştırma Uygulama İzinleri Genelgesi.

İlgi (a) yazı ile Orta Doğu Teknik Üniversitesi, Fen Edebiyat Fakültesi, Psikoloji Bölümü Öğretim Üyelerinden Prof.Dr. Sibel Kazak BERUMENT'in "Ebeveynlik Tutumlarının ve Ebeveyn-Çocuk İletişim Özelliklerinin Çocuk ve Ergen Gelişimine Etkisi" konulu araştırmasına veri sağlamak amacıyla daha önce 13/09/2019 tarihinde alınmış anket çalışması onay izin süresinin 2021-2022 eğitim - öğretim dönemini kapsayacak şekilde uzatılması talebine ilişkin ilgi yazı ve ekleri Başkanlığımız tarafından incelenmiştir.

Bakanlığımıza bağlı resmi/özel okul ve kurumlarda öğrenci ve öğrenci velilerinin katılımıyla yapılması planlanan uygulamanın covid-19 tedbirlerine uyulması ve denetimi il/ilçe millî eğitim müdürlükleri ve okul/kurum idaresinde olmak üzere, kurum faaliyetlerini aksatmadan, gönüllülük esasına göre; onaylı bir örneği Bakanlığımızda muhafaza edilen ve uygulama sırasında da mühürlü ve imzalı örnekten çoğaltılan, veri toplama araçlarının online olarak;

1. ve 2. sınıf öğrencilerine,

[https://boun.fra1.qualtrics.com/jfe/form/SV\\_5h7WoLH4TZIGsaq](https://boun.fra1.qualtrics.com/jfe/form/SV_5h7WoLH4TZIGsaq)

3, 4, 5, 6, 7, 8, 9, 10 ve 11. sınıf öğrencilerine,

[https://boun.fra1.qualtrics.com/jfe/form/SV\\_af4ujAjf6NTjLQa](https://boun.fra1.qualtrics.com/jfe/form/SV_af4ujAjf6NTjLQa)

annelere,

[https://boun.fra1.qualtrics.com/jfe/form/SV\\_bjUhpI4kMgvrMG](https://boun.fra1.qualtrics.com/jfe/form/SV_bjUhpI4kMgvrMG)

babalara,

[https://boun.fra1.qualtrics.com/jfe/form/SV\\_2ive4ZiHW9zzOOW](https://boun.fra1.qualtrics.com/jfe/form/SV_2ive4ZiHW9zzOOW)

adreslerinden 2021-2022 eğitim - öğretim yılında uygulanmasına ilgi (b) Genelge doğrultusunda izin verilmiştir.

Gereğini bilgilerinize rica ederim.

Mehmet Fatih LEBLEBİCİ  
Bakan a.  
Başkan

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**Bu belge güvenli elektronik imza ile imzalanmıştır.**

Belge Doğrulama Adresi : <https://www.turkiye.gov.tr/meb-ebys>  
Bilgi için: Ceyla AYGÜN Koordinatör  
Unvan : Öğretmen  
Faks:3124186401  
İnternet Adresi:

Bu evrak güvenli elektronik imza ile imzalanmıştır. <https://evrak.sorgu.meb.gov.tr> adresinden 0f97-66c4-35d2-a6ff-ff32 kodu ile teyit edilebilir.

## C. CURRICULUM VITAE

### SEVİNÇ AKKAYA TAHTA

#### CONTACT

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e-mail:

#### EDUCATION

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2017 - 2024	PhD	Middle East Technical University	Developmental Psychology
2015 - 2017	MA	Middle East Technical University	Developmental Psychology
2010 - 2015	BA	Middle East Technical University	Psychology

#### WORK EXPERIENCE

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11/2022- Present	Bartın University	Department of Psychology, Research Assistant
05/2018- 10/2022	Middle East Technical University	Department of Psychology, Research Assistant
04/2017- 04/2018	Bartın University	Department of Psychology, Research Assistant

#### AWARDS AND SCHOLARSHIP

---

2018-2022: Scholarship from The Scientific and Technological Research Council of Turkey (TÜBİTAK) for Ph.D. program (Code: 2211-A)

2012-2015 High Merit Scholarship from Türk Eğitim Vakfı

#### RESEARCH EXPERIENCE

---

01/2018 - Present - Volunteer Research Assistant in The Scientific and Technological Research Council of Turkey (TÜBİTAK) 1003 Project (Project Code: 113K033): Türkiye, Family, Child and Adolescent Project (The Effects of Parenting Attitudes and Parent Child Interaction on Child and Adolescent Developmental Outcomes). Supervised by Prof. Dr. Sibel Kazak Berument. 2018 - Current.

2015-2017 \* Research Assistant in TÜBİTAK 1001 Project (Project code: 113K222): Turkish Care Types Study (Longitudinal Investigation of the Effects of Temperament, and Care Type on The Developmental Outcomes of Infant and Children Who Are Under the Care of Social Services). Supervised by the Prof. Dr. Sibel Kazak Berument. 2014 - 2017.

## **PUBLICATIONS**

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- Bakir-Demir, T., Berument, S. K., & **Akkaya, S.** (2021). Nature connectedness boosts the bright side of emotion regulation, which in turn reduces stress. *Journal of Environmental Psychology*, 76, 101642.  
<https://doi.org/10.1016/j.jenvp.2021.101642>
- Okur-Ataş, Ş., **Akkaya, S.**, Güneş, S., & Berument, S. K. (2024). Korunma Altındaki Çocukların Gelişimlerinin Bakım Tiplerine ve Mizaç Özelliklerine Göre Karşılaştırılması. *Türk Psikoloji Dergisi*, 39.  
<https://doi.org/10.31828/turkpsikoloji.1349648>

## **PRESENTATIONS IN PEER REVIEWED INTERNATIONAL CONFERENCES**

---

- Ertekin, Z., Bayram-Gülaçtı, H., Gölcük, M., Memişoğlu Sanlı, A., **Akkaya, S.**, Durmuş, R., Şahin-Acar, B., Doğan, A., Tahiroğlu, D. & Berument, S. K. (2023). Prospective associations between parenting practices, temperament, and sibling conflict during COVID-19. Flash Talk Presentation at the Biennial Meeting of Society for Research in Child Development (SRCD) on March 23-25, Salt Lake City, USA.
- Akkaya, S.**, & Berument, S.K.(2019). Anger and Depressive Rumination in Adolescence: The Role of Maternal and Individual Factors. Individual Poster was presented in the Biennial Meeting of Society for Research in Child Development (SRCD) in March 21 - 23, 2019, Baltimore, Maryland, USA
- Bayram-Gülaçtı, H. Berument, S.K., Ertekin, Z., & **Akkaya, S.** (2019). Growth Rates in Elicited Imitation of Toddlers in Turkish Care Types Study: The Role of Temperament. Individual Poster was presented in the Biennial Meeting of Society for Research in Child Development (SRCD) in March 21 - 23, 2019, Baltimore, Maryland, USA
- Taşfiliz, D., Berument, S.K., **Akkaya, S.**, & Koç, G. (2017). Changes in emotion recognition and comprehension skills of children in care: Turkish care types study. (Oral Presentation). The Biennial Meeting of European Congress of Psychology in July 11-14 at Amsterdam, the Netherlands.

## **PRESENTATIONS IN PEER REVIEWED NATIONAL CONFERENCES**

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- Ertekin, Z., Bayram-Gülaçtı, H., Gölcük, M., Memişoğlu Sanlı, A., **Akkaya, S.**, Durmuş, R., Şahin-Acar, B., Doğan, A., Tahiroğlu, D. & Berument, S. K. (2022). Covid-19 Sırasında Ebeveynlik Uygulamaları, Mizaç ve Kardeş Çatışması Arasındaki İlişkiler. Individual Presentation at the 21th National Psychology Congress, 13-16 October November, İstanbul. Turkey.

- Akkaya, S. & Berument, S.K.** (2018, Kasım). Üzüntü ve öfke ruminasyonunda mükemmeliyetçiliğin ve mizacın rolü. Poster Sunum. 20. Ulusal Psikoloji Kongresi, 15-17 Kasım, Ankara, Türkiye
- Akkaya, S., Berument, S.K., Ertekin, Z., Bayram-Gülaçtı, H.** (2018). Farklı Bakım Tiplerinde Kalan Bebeklerin Gelişimlerinin Boylamsal Olarak İncelenmesi. Sözlü Sunum. 20. Ulusal Psikoloji Kongresi, 15-17 Kasım, Ankara. Turkey.
- Akkaya, S., Berument, S.K., Güneş, S., & Okur, Ş.** (2016). Okul Öncesi Dönemde Devlet Koruması Altındaki Çocukların Genel Gelişimi. Sözlü sunum. 19. Ulusal Psikoloji Kongresi, 5-7 Eylül, İzmir, Türkiye.

## D. TURKISH SUMMARY / TÜRKÇE ÖZET

### GENEL GİRİŞ

Bireyler bebeklikten itibaren duygusal uyarılmalarını düzenlemek için belirli stratejiler kullanmaya başlar ve gelişim sürecinde bu stratejiler bilişsel gelişime paralel olarak çeşitlilik kazanır (Cole, ve ark., 2004). Özellikle, ergenlik döneminde duyguları düzenlemek amacıyla kullanılan düzenleme stratejilerin daha karmaşık ve ağırlıklı olarak bilişsel odaklı hale geldiği görülmektedir (Schafer ve ark., 2017). Bu anlamda, ergenlik dönemi duygu düzenlemede önemli kazanımların görüldüğü önemli bir gelişim evresi olarak kabul edilmektedir. Bununla birlikte, ergen beyni birçok nöral, hormonal, bilişsel ve sosyal değişim ve gelişimden aşamalı olarak geçmekte ve bu da ergenlik döneminin kendi içerisinde özgün gelişimsel dönemlerin görülmesinin yolunu açmaktadır (Spear, 2000). Bu nedenle, ergenlerin olumsuz olaylara karşı kullandıkları bilişsel duygu düzenleme stratejilerinin ergenliğin farklı evreleri dikkate alınarak incelenmesinin, duygu düzenlemedeki gelişimsel süreci anlayabilmek açısından önemli olduğu düşünülmektedir. Buna ek olarak, alan yazındaki birçok çalışma bazı duygu düzenleme stratejilerinde cinsiyet farklılıklarının ortaya çıkması açısından da ergenlik dönemine vurgu yapmaktadır (Jose & Brown, 2008). Bu amaçla, mevcut tezin ilk bölümü (Çalışma 1) ergenlik döneminde bilişsel duygu düzenleme stratejilerindeki gelişimsel evre ve cinsiyet farklılıklarını incelemeyi amaçlamıştır. Buna ek olarak, bireylerin psikolojik işlevleriyle ilişkili olarak bilişsel duygu düzenleme stratejileri üzerine yapılan çok sayıda araştırma, duyguları yönetmek için kullanılan tüm stratejilerin uyarlanabilir olmadığını ortaya koymuştur. Şöyle ki, önceki çalışmalarda duygu düzenleme stratejilerinden bazılarının stres tepkisini hafifletmenin aksine artırdığı bildirilmiştir (Chan ve ark., 2016; Verkuil ve ark., 2010). Bu temelde, duygu düzenleme stratejileri alan yazında iki gruba ayrılmaktadır: uyumlu ve uyumsuz stratejiler (Garnefski ve ark., 2001). Ancak, yetişkin örnekleme çalışılanların aksine, bilişsel duygu düzenleme stratejileri ergenlik dönemindeki problem davranışlarla ilişkili olarak nispeten az çalışılmıştır. Ayrıca, bilişsel düzenleme stratejileri ve problem davranışlar arasındaki ilişki açısından yetişkin örneklemler için bildirilen bulguların ergenliğin farklı aşamalarında ve cinsiyetler arasında tekrarlanıp tekrarlanamayacağı büyük ölçüde bilinmemektedir (bkz., Compas ve ark., 2017). Bu nedenle, Çalışma 1'in ikinci amacı, cinsiyet ve gelişim evresini dikkate alarak, ergenlik döneminde bilişsel duygu düzenleme stratejileri ile içe yönelim ve dışa yönelim sorunları arasındaki eşzamanlı ilişkileri araştırmaktır.

Ardından, tezin ikinci bölümü (Çalışma 2), uyumsuz bilişsel duygu düzenleme stratejilerinin ergenliğin farklı evrelerindeki ebeveyn öncüllerine odaklanmıştır. Bu kapsamdaki önceki çalışmalar, ebeveynlerin çocukların duygu düzenleme gelişimindeki önemli rolünü vurgulamaktadır (Morris vd., 2007). Bu bağlama kültürel çerçeveden bakan çeşitli teorik modeller, ebeveynlerin kültürel olarak düzenlenmiş çocuk yetiştirme bilişleri ve ebeveynlik uygulamaları aracılığıyla çocuklarının sosyalleşme bağlamını inşa ettiklerini ve böylece çocuklarının gelişimsel sonuçlarını etkilediklerini öne sürmektedir (Super & Harkness, 1997). Bu temelde, Çalışma 2, ebeveynlik inançları, ebeveynlik davranışları ve gelişimsel çocuk çıktıları arasındaki ilişkileri uyumsuz bilişsel duygu düzenleme açısından araştırmayı amaçlamıştır. Önceki çalışmalar, ebeveynlerin duygular hakkındaki inançlarının ebeveynlik stratejilerini ve davranışlarını şekillendirdiğini ve bu yolla çocuğun gelişimsel sonuçları üzerinde belirleyici rol oynadığını göstermektedir (Halberstadt vd., 2013; Trommsdorff ve Friedlmeier, 2010). Benzer bir çizgide, Çalışma 2 annelerin kültüre özgü bir ebeveynlik stratejisi olarak utandırmaya ilişkin inançlarına odaklanmıştır. Özellikle, utandırma ve olumsuz ebeveynlik davranışları çoğunlukla optimal olmayan gelişimsel sonuçlarla ilişkilendirildiğinden, annelerin utandırma hakkındaki inançları, reddedici ve psikolojik olarak kontrol edici davranışları gibi ebeveynlik davranışları ve uyumsuz bilişsel duygu düzenleme stratejileri ile ilişkili olarak incelenmiştir. Ayrıca, literatüre ve Çalışma 1'in sonuçlarına dayanarak, gelişimsel evre ve cinsiyetin düzenleyici rolü önerilen aracılık modelinde test edilmiştir. Bu amaçlar doğrultusunda, mevcut tez, her biri bir çalışmaya ayrılmış iki bölümden oluşmakta ve ilgili çalışmaların sırasıyla giriş, yöntem, bulgular ve tartışma bölümlerini içermektedir.

## ÇALIŞMA 1

### Giriş

Duygu düzenleme, duygusal tepkiyi yönetmek için çeşitli fizyolojik, davranışsal ve bilişsel yönleri içeren çok bileşenli bir süreç olarak literatürde ele alınmaktadır (Garnefski ve ark., 2001). Buna göre, en kapsamlı ve bilinen tanımı ile duygu düzenleme "kişinin hedeflerine ulaşmak için duygusal tepkilerini, özellikle de bu duyguların yoğunluk ve zamansal boyutlarını izlemek, değerlendirmek ve değiştirmekten sorumlu dışsal ve içsel süreçler" olarak incelenmektedir (Thompson, 1994, s. 27-28). Duyguyu deneyimleme ve düzenleme sürecinin kendisi bilişsel, fizyolojik ve davranışsal unsurları içermektedir. Bu doğrultuda, duygu düzenleme stratejileri de literatürde bilişsel, davranışsal, fizyolojik ve deneyimsel olarak farklı şekillerde sınıflandırılmaktadır (Gross vd., 2006). Bu tez kapsamında, yalnızca bilişsel duygu düzenleme stratejilerine odaklanılmıştır.

Bilişsel Duygu Düzenleme Modeli'nde (CERM) Garnefski ve arkadaşları (2001) duygu düzenlemeyi, bireylerin olumsuz veya stresli durumlarla başa çıkmak için kullandıkları bir tür

başa çıkma süreci olarak kavramsallaştırmıştır. Şöyle ki, duygu düzenlemenin bilişsel modeli, özellikle bireylerin içsel veya dışsal zorluklarla karşılaştıklarında duygu-biliş süreçlerini nasıl yönettikleri üzerinde durmaktadır. Bu doğrultuda, dokuz farklı bilişsel duygu düzenleme stratejisi tanımlanmıştır. Bu stratejiler kendini suçlama, başkalarını suçlama, ruminasyon, felaketleştirme, kabullenme, olumlu yeniden odaklanma, olumlu yeniden değerlendirme, planlamaya yeniden odaklanma, perspektife koymadır. Ancak, bu tez kapsamında, daha önce ergen örneklemelerinde problem davranışlarla ilişkili olduğu tespit edilen (Garnefski ve ark., 2005; Garnefski ve Kraaij, 2006) sadece beş bilişsel duygu düzenleme stratejisi (yani, ruminasyon, kendini suçlama, felaketleştirme, olumlu yeniden değerlendirme ve olumlu yeniden odaklanma) incelenmiştir. *Kendini suçlama*, bireylerin olumsuz deneyimlerinin sebep ve sonuçlarından kendilerinin sorumlu olduğuna dair bilişsel atıflarını ifade eder. *Ruminasyon*, kişinin olumsuz deneyimlerle ilgili olarak kendi duygu ve düşünceleri üzerinde tekrar tekrar durması olarak tanımlanmaktadır. *Felaketleştirme*, bir deneyimin olumsuzluğuna odaklanan düşünceler olarak tanımlanır. *Olumlu yeniden odaklanma* ise; kişinin odağını başına gelenlerden uzaklaştırması ve daha iyi şeyler düşünmesi olarak tanımlanır. Son olarak; *olumlu yeniden değerlendirme*, olumsuz deneyimin kişisel gelişim için bir fırsat olarak yeniden yorumlanması olarak tanımlanır (Garnefski vd., 2001).

Önceki çalışmalar, tüm bilişsel duygu düzenleme stratejilerinin olumsuz duyguları azaltmada ve dolayısıyla psikolojik sonuçları iyileştirmede yardımcı olmadığına işaret etmektedir (Mazaheri ve ark., 2016; Wytykowska ve ark., 2021). Bu bağlamda, problem davranışların başlaması veya sürdürülmesi ile negatif yönde ilişkili bulunan stratejiler uyumlu (yapıcı); pozitif yönde ilişkili bulunanlar ise uyumsuz (yapıcı olmayan) stratejiler olarak iki grupta sınıflandırılmaktadır (Garnefski ve ark., 2004; Wytykowska ve ark., 2021). Çalışma 1’de, düzenleme stratejilerinin uyarlanabilirliği, içe yönelim ve dışa vurum problemleriyle olan ilişkileri üzerinden incelenmiştir.

Nöral, hormonal, bilişsel ve sosyal değişim ve gelişimle birlikte, gelişim sürecinde birçok alanda yaşa bağlı önemli değişimler gözlenmektedir (Chiasson ve ark., 2017; Spear, 2000; Zimmermann ve Iwanski, 2014). Duygu düzenleme becerilerinin gelişimi açısından özellikle ergenlik dönemi anlamlı kazanımların olduğu bir dönem olarak görülmektedir (Duarte ve ark., 2015). Bununla birlikte, her ne kadar biyolojik ve bilişsel gelişim ergenlik süresince dikkat çekici derecede hızlı olsa da kademeli olarak gerçekleşir ve ergenliğin farklı evrelerinde değişkenliğe yol açar (Silvers ve ark., 2012; Spear, 2000). Ancak, bilişsel duygu düzenleme stratejileri üzerine yapılan önceki çalışmalar çoğunlukla ergenliği bir bütün olarak incelemiş ve yaşamın diğer evreleriyle (örneğin, çocukluk, yetişkinlik) karşılaştırmıştır. Buna karşın, ergenliğin farklı evrelerindeki bilişsel duygu düzenleme stratejileri hakkında çok az şey bilinmektedir. Bu anlamda alan yazında farklı bakış açıları bulunmaktadır. İlk olarak,

duygusal uyarıların kontrolünde kritik bir rol oynayan prefrontal korteksin ergenlik döneminde önemli ölçüde gelişiyor olması, ergenlerin duygu düzenleme kapasitelerini büyük ölçüde artırdığı düşünülmektedir (McRae ve ark., 2012). Dahası, soyut akıl yürütme ve çaba gerektiren kontrol gibi bilişsel gelişmeler, ergenlerin duygu düzenleme repertuarlarına çeşitli bilişsel duygu düzenleme stratejilerini dahil etmelerini sağlar (Garnefski ve ark., 2007; Sabatier ve ark., 2017). Bu anlamda, ön ergenlikten geç ergenliğe kadar duygu düzenlemenin daha etkili hale gelmesi beklenmektedir. İkinci olarak, öte yandan ergenlik, önemli nörolojik ve bilişsel kazanımların yanı sıra birçok duygusal ve sosyal krizin de yaşandığı bir yaşam dönemidir. Şöyle ki, ergenlik döneminin ana temaları olan bağımsızlık arzusu, akran odaklı yeni sosyal etkileşimler için aile odaklı sosyal çevreden ayrılma, romantik ilişkilerle ilgili endişeler ve çeşitli akademik zorluklar, ergenlerin sıklıkla duygusal olarak uyarılmalarına neden olmaktadır (Eccles, 1999; Powers ve Casey, 2015). Bu perspektiften bakıldığında, sosyo-duygusal zorluklar yaşla birlikte arttıkça, ergenlerin stresörlere yanıt olarak duygularını düzenlemek için yoğun bir şekilde uyumsuz (yapıcı olmayan) stratejileri kullanmaları beklenebilir. Önceki çalışma bulguları bilişsel duygu düzenleme stratejileri özelinde incelendiğinde, sonuçlar bilişsel duygu düzenleme stratejilerinin hem uyumlu (Gullone vd., 2010; McRae vd., 2012; Silvers vd., 2012) hem de uyumsuz stratejiler (Cracco vd., 2017; Zimmermann ve Iwanski, 2014) için yaşla birlikte arttığına işaret etmektedir.

Buna ek olarak, çok sayıda araştırma duygusal süreçler ve duygu düzenleme stratejileri açısından cinsiyet farklılıklarını da vurgulamaktadır (Budziszewska ve Hansen, 2020; Perchtold vd., 2019; Sanchis-Sanchis vd., 2020; Zahn-Waxler vd., 2008). Örneğin, birçok çalışma kadınların daha fazla sosyal ve duygu odaklı düzenleme stratejileri kullandığını, erkeklerin ise daha fazla duygu gizleme ve duygudan kaçınma stratejileri kullanma eğiliminde olduğunu bildirmişlerdir (Nolen-Hoeksema, 2012). Benzer şekilde, kadınların stresli deneyimlerle başa çıkmak için duyguları hakkında daha fazla ruminasyon yapma eğiliminde olduğu bildirilmiştir (Johnson & Whisman, 2013). Bu bulgular, duygusal deneyim ve ifadenin yanı sıra duygular üzerine düşünmenin kadınlarda daha yaygın olduğunu, erkeklerin ise duygusal deneyim veya ifadeyi bastırma veya duygularından uzaklaşma eğiliminde olduğunu öne süren cinsiyet rolü teorileriyle tutarlı görünmektedir (Nolen-Hoeksema, 2012). Bu doğrultuda, uyumlu ve uyumsuz stratejilerin kullanımında da cinsiyet farklılıklarının gözlemlenmesi beklenebilir.

Bu alan yazın ışığında, mevcut çalışma (Çalışma 1) ergenliğin farklı evrelerini ve cinsiyeti dikkate alarak bilişsel duygu düzenleme stratejilerini incelemeyi amaçlamaktadır. Duygu düzenlemenin kullanımında ortaya çıkan farklılıklara ek olarak, duygu düzenleme stratejileri ile problem davranışlar arasındaki ilişkiler de gelişimsel evreye (ön, erken ve orta ergenlik) ve cinsiyete bağlı olarak değişebilir. Yani, bir gelişim evresi veya cinsiyet için uyumlu (yapıcı)



bulunan belirli bir strateji, diğerevrelereveyacinsiyet için nötr veya uyumsuz (yapıcı olmayan) bir strateji olabilir (Compas, vd., 2017). Bu nedenle, bu çalışmada bilişsel duygu düzenleme stratejilerinin problem davranışlarla ilişkisi farklı ergenlik evreleri ve cinsiyetler göz önünde bulundurularak araştırılmıştır.

### **Çalışma 1 Araştırma Soruları ve Hipotezler**

Birlikte ele alındığında, mevcut alan yazında görülen araştırma boşluklarını doldurmak için Çalışma 1 temel olarak iki yönlü soruyu yanıtlamayı amaçlamıştır: 1) Ergenlik döneminde bilişsel duygu düzenleme stratejilerinin kullanımı cinsiyete ve gelişimsel evreye göre farklılık göstermekte midir? 2) Ergenlikte duyguları düzenlemek için kullanılan bilişsel stratejiler ile problem davranışlar arasındaki ilişki gelişimsel evreye ve cinsiyete göre değişmekte midir? Bu amaçla, olumsuz deneyimlere yanıt olarak beş bilişsel duygu düzenleme stratejisinin (kendini suçlama, ruminasyon, felaketleştirme, olumlu yeniden değerlendirme ve olumlu yeniden odaklanma) kullanımı üç eğitim düzeyinde (ilkokul, ortaokul ve lise) ve cinsiyetler arasında incelenmiştir. Bu bağlamda, literatürde genellikle bildirilen yaş aralıklarıyla örtüştüğü için (Chiasson vd., 2017), ilkököl (3. ve 4. sınıflar), ortaokul (5 ila 8. sınıflar) ve lise (9 ila 11. sınıflar) örneklemelerinin sırasıyla ergenlik öncesi (ön ergenlik), erken ergenlik ve orta ergenliğe karşılık geldiği varsayılmıştır. Daha sonra, bilişsel stratejiler ergenlerin psikolojik işleyişiyle, yani içe yönelim ve dışa yönelim sorunlarıyla ilişkili olarak incelenmiştir. Hem cinsiyet hem de gelişim evreleri için farklılaşan yolları test etmek amacıyla, okul düzeyi temelinde yapılan analizlere cinsiyet ara değişken olarak eklenmiştir. Bilişsel duygu düzenleme ile ilgili literatürdeki mevcut bulgular göz önüne alındığında, bu çalışmanın hipotezleri aşağıdaki gibidir.

*1) Bilişsel duygu düzenleme stratejilerinin kullanımı ile ilgili olarak,*

a) Bilişsel duygu düzenleme stratejilerinin daha büyük ergenler tarafından daha sıklıkla kullanılması beklenmiştir. Bu nedenle, ilkökoldan liseye kadar düzenleme stratejilerinin kullanımında önemli bir artış olacağı ön görülmüştür.

b) Belirli duygu düzenleme stratejilerinde cinsiyet farklılıkları olması beklenmiştir. Buna göre, uyumsuz bilişsel stratejiler (örneğin, ruminasyon, kendini suçlama ve felaketleştirme) kızlar tarafından daha sıklıkla kullanılması ön görülmüştür. Ancak, alan yazındaki çelişkili bulgular nedeniyle, uyumlu (yapıcı olan) stratejilerin (yani, olumlu yeniden değerlendirme ve olumlu yeniden odaklanma) kullanımına ilişkin ilişkinin yönüne yönelik bir öngörde bulunulmamıştır.

c) Bilişsel stratejilerin kullanımına ilişkin olarak cinsiyet ve gelişimsel evre arasında anlamlı bir etkileşim olması beklenmiştir. Buna göre, cinsiyet farklılıklarının erken ergenlik döneminde ortaya çıkmaya başladığını öne süren önceki araştırmalarla tutarlı olarak, önerilen

cinsiyet farklılıkları ortaokul ve lise çağındaki ergenler arasında gözlemlenmesi ön görülmüştür.

2) *Bilişsel duygu düzenleme stratejileri ve problem davranışlar arasındaki bağlantı ile ilgili olarak,*

a) Olumlu yeniden değerlendirme ve yeniden odaklanma gibi varsayımsal olarak uyarlanabilir stratejilerin olumsuz, kendini suçlama, ruminasyon ve felaketleştirme gibi uyumsuz stratejilerin ise içselleştirme ve dışsallaştırma sorunlarını olumlu yönde yordaması beklenmektedir.

b) Bilişsel stratejileri kullanmanın problem davranışlar ile arasındaki ilişkilerin özellikle büyük ergen grupları için anlamlı ve güçlü olması beklenmiştir.

c) Cinsiyetin ergenlik döneminde bilişsel stratejiler ve problem davranışlar arasındaki ilişkide olası düzenleyici bir rolü açıklayıcı (keşifsel) bir temelde test edilmiştir.

## **Yöntem**

### **Katılımcılar**

Bu çalışmanın örneklemini, Türkiye'de 6-17 yaş arası çocuk ve ergenlerin gelişimi üzerinde çeşitli çevresel ve ailesel faktörlerin etkisinin incelendiği Türkiye Aile, Çocuk ve Ergen Projesi'nden alınmıştır. Mevcut çalışmadaki örneklem 3. ve 11. sınıf düzeyleri arasındaki öğrenciler ve annelerinden oluşmaktadır. Çalışmada ilkokul (n = 1130), ortaokul (n = 2199) ve lise (n = 1712) düzeylerinden toplam 5041 (ön)ergen bulunmaktadır. Öğrencilerin yaşları sekiz ile on dokuz arasında değişmektedir ( $Ort = 12.52$ ,  $SS = 2.59$ ) ve katılımcıların %53.5'i kız öğrencilerden oluşmaktadır. Örnekleme dair ayrıntılı bilgiler Tablo 1.1'de gösterilmiştir.

### **Veri toplama Araçları**

Ön ergen ve ergenlerin olumsuz bir durum ile karşılaştıklarında duygularını düzenlemek amacıyla yaptıkları olaya ilişkin bilişsel atıfları "Bilişsel Duygu Düzenleme Ölçeği" (CERQ, Garnefski ve ark., 2001, 2007) kullanılarak değerlendirilmiştir. Örneklemedeki farklı yaş grupları arasında gelişimsel bir karşılaştırma yapabilmek için ölçeğin 9-11 yaş arası çocuklara ve 12 yaş üstü katılımcılara uygulanan iki ayrı formu bu proje kapsamında birleştirilerek tüm yaş gruplarına uygulanabilecek tek bir form haline getirilmiştir. Ölçek orijinalinde, bireylerin duygularını düzenlemek için kullandıkları, her biri 4 madde içeren dokuz düşünce temelli stratejiden oluşmaktadır; ancak, bu çalışmada beş alt boyut (kendini suçlama, ruminasyon, felaketleştirme, olumlu yeniden odaklanma ve yeniden değerlendirme) kullanılmıştır. Cronbach alfa değerleri kendini suçlama ( $\alpha = .78$ ), ruminasyon ( $\alpha = .80$ ), felaketleştirme ( $\alpha = .73$ ), olumlu yeniden odaklanma ( $\alpha = .81$ ) ve olumlu yeniden değerlendirme ( $\alpha = .69$ ) için kabul edilebilir aralıklarda bulunmuştur.

İçe yönelim ve dışavurum problemleri gözden geçirilmiş Çocuk Davranış Kontrol Listesi'nin (Achenbach ve Rescorla, 2001; Dümenci vd., 2004) Türkçe versiyonu ile ölçülmüştür. Ölçek,

İçe yönelim boyutu için kaygı/depresyon (13 madde), sosyal çekilme/depresyon (8 madde) ve somatik yakınmalar (5 madde) olmak üzere üç alt ölçekten; dışavurum boyutu için ise kural çiğneme (15 madde) ve saldırgan davranışlar (18 madde) olmak üzere iki alt ölçekten oluşmaktadır. İçe yönelim problemleri için Cronbach alfa değerleri sosyal çekilme/depresyon, anksiyete/depresyon, somatik şikayetler ve toplam ölçek için sırasıyla .75, .80, .80 ve .91; dışavurum problemleri için ise kural çiğneme sorunları, saldırgan davranışlar ve toplam dışavurum sorunları için sırasıyla .81, .86 ve .89 bulunmuştur.

### **İşlem**

Bu çalışma, Türkiye Bilimsel ve Teknolojik Araştırma Kurumu (TÜBİTAK) tarafından desteklenen "Türkiye Aile, Çocuk ve Ergen Projesi" adlı ulusal çapta boylamsal araştırmanın bir parçası olarak yürütülmüştür. Projenin etik onayı ve gerekli izinler Orta Doğu Teknik Üniversitesi İnsan Denekleri Etik Kurulu'ndan, Türkiye Milli Eğitim Bakanlığı'ndan ve verilerin toplandığı okulların yönetimlerinden alınmıştır. Türkiye'de temsili bir örnekleme ulaşmak için okullar Türkiye İstatistik Kurumu (TÜİK) tarafından belirlenmiştir. Annelerden yazılı bilgilendirilmiş onamlar çevrimiçi olarak alınmış, ardından anneler telefonla aranarak proje ve veri toplama süreci hakkında sözlü olarak daha detaylı bilgilendirilmiştir. Veriler Qualtrics aracılığıyla toplanmıştır. Okuryazar olan ve evinde internet bağlantısı bulunan anneler anketleri telefonlarından doldururken, okuryazar olmayan veya internet erişimi bulunmayan anneler anketleri çocuklarının okullarındaki tabletlerden doldurmuştur. Anneler için veri toplama süreci tamamlandıktan sonra, okullarda çocuklardan veri toplanmıştır.

### **Bulgular**

#### **Bilişsel Duygu Düzenlemede Okul Düzeyi ve Cinsiyet Farklılıklarına Yönelik Sonuçlar**

1a, 1b ve 1c'yi içeren ilk hipotez setini test etmek amacıyla, beş bilişsel duygu düzenleme stratejisindeki okul düzeyi ve cinsiyet farklılıklarını incelemek için çok değişkenli varyans analizi (3x2) yapılmıştır. Her bir bilişsel strateji için bu farklılıkları incelemek üzere tek değişkenli F-testleri ve uygun olan yerlerde Bonferroni çoklu karşılaştırma testleri yürütülmüştür.

Buna göre, bilişsel stratejilerin kullanımı, kendini suçlama [ $F(2,5024) = 44.50, p < .001, \eta p^2 = .02$ ], ruminasyon [ $F(2,5024) = 80.41, p < .001, \eta p^2 = .03$ ], felaketleştirme [ $F(2,5024) = 32.23, p < .001, \eta p^2 = .01$ ], olumlu yeniden odaklanma [ $F(2,5024) = 55.91, p < .001, \eta p^2 = .02$ ] ve olumlu yeniden değerlendirme [ $F(2,5024) = 44.50, p < .001, \eta p^2 = .02$ ] stratejilerinde okul düzeyleri arasında anlamlı farklılıkların olduğu görülmüştür. Bonferroni çoklu karşılaştırma testleri, kendini suçlama (ilkokul için:  $Ort = 2.66, SS = 0.99$ ; ortaokul için:  $Ort = 2.89, SS = 0.97$ ; ve lise için:  $Ort = 3.02, SS = 0.93$ ) ve ruminasyon (ilkokul için:  $Ort = 3.04, SS = 1.03$ ; ortaokul için:  $Ort = 3.32, SS = 1.00$ ; ve lise için:  $Ort = 3.53, SS = 1.00$ ) stratejilerinin kullanımında okul seviyesiyle birlikte anlamlı bir artış olduğunu arttırdığını ortaya koymuştur.

Ayrıca, sonuçlar ortaokul ve lisedeki ergenlerin felaketleştirme (ilkokul için:  $Ort = 2.70$ ,  $SS = 1.00$ ; ortaokul:  $Ort = 2.95$ ,  $SS = 0.98$ ; ve lise için:  $Ort = 3.00$ ,  $SS = 0.93$ ) ve yeniden değerlendirme (ilkokul için:  $Ort = 2.91$ ,  $SS = 0.95$ ; ortaokul için:  $Ort = 3.14$ ,  $SS = 0.92$ ; ve lise için:  $Ort = 3.18$ ,  $SS = 0.85$ ) stratejisini anlamlı şekilde ilkökul düzeyindeki ergenlik öncesi gruptan daha sık olarak kullandıklarını göstermiştir. Son olarak, sonuçlar pozitif yeniden odaklanma stratejisinin lisedeki ergenler tarafından diğer okul seviyelerine kıyasla daha az kullanıldığını göstermiştir (ilkokul için:  $Ort = 3.30$ ,  $SS = 1.08$ ; ortaokul için:  $Ort = 3.24$ ,  $SS = 1.05$ ; ve lise için:  $Ort = 2.93$ ,  $SS = 0.98$ ).

Ayrıca, sonuçlar kendini suçlama [ $F(2,5024) = 9.38$ ,  $p < .01$ ,  $\eta_p^2 = .00$ ], ruminasyon [ $F(2,5024) = 69.98$ ,  $p < .001$ ,  $\eta_p^2 = .01$ ], felaketleştirme [ $F(2,5024) = 44.10$ ,  $p < .001$ ,  $\eta_p^2 = .01$ ] ve olumlu yeniden odaklanma [ $F(2,5024) = 8.53$ ,  $p < .01$ ,  $\eta_p^2 = .01$ ] için anlamlı cinsiyet farklılıklarının olduğunu göstermiştir. Buna göre, kızlar olumsuz durumlar karşısında kendilerini suçlama (kızlar için:  $Ort = 2.93$ ,  $SS = 0.99$ ; erkekler için:  $Ort = 2.83$ ,  $SS = 0.94$ ), ruminasyon (kızlar için:  $Ort = 3.45$ ,  $SS = 0.97$ ; erkekler için:  $Ort = 3.19$ ,  $SS = 1.00$ ) ve felaketleştirme (kızlar için:  $Ort = 3.00$ ,  $SS = 0.97$ ; erkekler için:  $Ort = 2.80$ ,  $SS = 0.97$ ) davranışlarını erkeklerden daha fazla kullandıklarını bildirmişlerdir. Buna karşılık, erkekler olumlu yeniden odaklanma stratejisi erkekler tarafından daha sıklıkla kullandıklarını rapor etmişlerdir (kızlar için:  $Ort = 3.09$ ,  $SS = 0.91$ ; erkekler için:  $Ort = 3.21$ ,  $SS = 0.91$ ).

Son olarak, okul düzeyi ve cinsiyet arasındaki etkileşim etkisinin ruminasyon [ $F(2,5024) = 5.22$ ,  $p < .01$ ], felaketleştirme [ $F(2,5024) = 3.85$ ,  $p < .05$ ] ve olumlu yeniden odaklanma [ $F(2,5024) = 9.60$ ,  $p < .001$ ] stratejileri için anlamlı olduğu görülmüştür. Çoklu karşılaştırma testi sonuçlarına göre, ruminasyon ve yeniden odaklanma stratejileri için yukarıda belirtilen cinsiyet farklarının sadece ortaokul ve lise düzeyinde; felaketleştirme için ise ilkökul ve lise okul düzeylerinde anlamlı olduğu bulunmuştur.

**Bilişsel Duygu Düzenleme ve Problem Davranışlar Arasındaki İlişkiye Yönelik Sonuçlar**  
Bilişsel duygu düzenleme stratejileri ile ergenlerin içe yönelim ve dışa yönelim sorunları arasındaki ilişkileri her bir okul düzeyi için incelemek üzere üç aşamalı toplam altı hiyerarşik çoklu regresyon analizi yapılmıştır. *İlkokul düzeyindeki içe yönelim problemleri* için son adımda elde edilen sonuçlar göz önüne alındığında, kızlarda erkeklere kıyasla daha fazla içe yönelim belirtisi rapor edilmiştir ( $\beta = -.07$ ,  $p < .05$ ). Ayrıca, olumlu yeniden değerlendirmenin daha sık kullanılması daha düşük düzeyde içe yönelim sorunları ile ilişkilendirilmiştir ( $\beta = -.15$ ,  $p < .05$ ). İlkokul düzeyindeki dışa vurum problemleri için sonuçlar yorumlandığında, sadece cinsiyet ( $\beta = .08$ ,  $p < .05$ ) dışa vurum problemleri ile anlamlı şekilde ilişkili bulunmuştur. Buna göre, anneler erkek çocuklarda daha fazla dışa vurum problemi rapor etmiştir. Ancak, bilişsel duygu düzenleme stratejilerinin hiçbiri bu okul düzeyinde dışa vurum sorunları ile ilişkili bulunmamıştır.

*Ortaokul düzeyindeki içe yönelim ve dışa vurum problemlerine* ilişkin sonuçlar cinsiyet açısından problem davranışlarının bir önceki okul düzeyi ile benzerlik göstermiştir. Buna ek olarak, olumlu yeniden odaklanma stratejisi ( $\beta = -.12, p < .01$ ) içe yönelim sorunlarını negatif yönde yordamıştır. Buna karşılık, kendini suçlama ( $\beta = .07, p < .05$ ) ve felaketleştirme ( $\beta = .16, p < .001$ ) stratejileri ortaokuldaki içe yönelim sorunları ile pozitif yönde ilişkilidir. Benzer şekilde, olumlu yeniden odaklanma ( $\beta = -.11, p < .01$ ) ve ruminasyon ( $\beta = -.10, p < .01$ ) ortaokuldaki dışa vurum sorunlarını olumsuz yönde yordamıştır. Buna karşılık, kendini suçlama ( $\beta = .09, p < .05$ ) ve felaketleştirme ( $\beta = .10, p < .05$ ) stratejileri bu okul düzeyinde dışsallaştırma sorunları ile pozitif yönde ilişkili bulunmuştur.

Son olarak, *lise düzeyindeki içe yönelim ve dışa vurum problemlerine* ilişkin sonuçlar, kızlarda içe yönelim problemlerinin erkeklere kıyasla daha fazla gözlemlendiğini; ancak dışa vurum problemlerinde bu okul düzeyinde anlamlı bir cinsiyet farklılığının görülmediğini göstermiştir. Ayrıca, pozitif yeniden odaklanmanın ( $\beta = -.11, p < .05$ ) içe yönelim problemleri ile negatif yönde; kendini suçlama ( $\beta = .17, p < .001$ ) ve felaketleştirme ( $\beta = .12, p < .01$ ) stratejilerinin ise pozitif yönde ilişkili olduğu bulunmuştur. Buna karşın, dışa vurum problemlerinde sadece felaketleştirme stratejisinin dışa vurum problemleri ile pozitif yönde ilişkili olduğu bulunmuştur.

Öte yandan, cinsiyet ve bilişsel duygu düzenleme stratejileri arasındaki etkileşim sonuçları hiçbir okul düzeyinde anlamlı bulunmamıştır.

## Tartışma

### **Bilişsel Duygu Düzenlemede Okul Düzeyi ve Cinsiyet Farklılıklarına Yönelik Sonuçlar**

İlk olarak, okul seviyesine bağlı olarak bilişsel duygu düzenleme stratejilerinin kullanımında bir artış olması beklenmiştir (hipotez1a). Bu anlamda, bulgular olumlu yeniden odaklanma dışındaki duygu düzenleme stratejileri için hipotezi büyük ölçüde desteklemektedir. Bazı araştırmacılar, ergenlik döneminde prefrontal korteksin olgunlaşmasının, ergenlerin durumları içsel olarak değerlendirmelerini ve olumsuz duygusal uyarınları bilişsel bir şekilde kontrol etmelerini sağladığını öne sürmektedir (Garnefski vd., 2007; Sabatier vd., 2017). Bu bağlamda yapılan geçmiş çalışmalar, çoğunlukla bilişsel yeniden değerlendirme stratejisindeki artış yoluyla, bilişsel duygu düzenlemede yaşa bağlı yeterliliği vurgulamıştır (McRae ve ark., 2012; Silvers ve ark., 2012). Ancak, mevcut çalışmanın bulguları, duygu düzenleme becerilerindeki gelişimin mutlaka uyarlanabilir yönde olması gerektiğini göstermektedir. Yani, yeniden değerlendirme gibi uyarlanabilir stratejilerin yanı sıra ruminasyon, kendini suçlama ve felaketleştirme gibi uyumsuz duygu düzenleme stratejilerinin okul seviyesine bağlı olarak artması, bilişsel duygu düzenleme kullanımının, stratejilerin uyarlanabilirliğinden bağımsız

olarak, ergenlik döneminde bilişsel büyümeyle birlikte artma eğiliminde olduğu görüşünü desteklemektedir (Garnefski ve ark., 2006; te Brinke ve ark., 2021).

İkinci olarak, cinsiyet etkisiyle ilgili olarak (hipotez 1b), literatürde uyumsuz stratejiler olarak sınıflandırılan kendini suçlama, ruminasyon ve felaketleştirmenin kızlar tarafından daha sıklıkla kullanılması beklenmiştir. Sonuçlar, beklentilere uygun olarak kızların kendini suçlama, ruminasyon ve felaketleştirme stratejilerini daha sık kullandığını göstermiştir. Ancak, mevcut çalışmada uyumlu olarak kabul edilen duygu düzenleme stratejileri (olumlu yeniden odaklanma ve değerlendirme) için cinsiyete özgü tutarlı bir yönelim bulunamamıştır. Buna göre, mevcut bulgular, kadınların genel olarak duygularla ilgili daha fazla deneyime sahip oldukları için daha fazla duygu düzenleme stratejisi kullanma eğiliminde oldukları görüşünü desteklemiyor gibi görünmektedir (Nolen-Hoeksema, 2012; te Brinke ve ark., 2021). Sonuçlar daha ziyade, kadınların muhtemelen daha yoğun duygusal deneyimleri nedeniyle duygularıyla etkisiz bir şekilde başa çıkma eğiliminde oldukları görüşüyle büyük ölçüde uyumlu görünmektedir (Webb ve ark., 2012). Buna ek olarak, bu çalışmada bulunan duygu düzenleme stratejilerindeki cinsiyete özgü tercihler, toplumsal cinsiyet rolü teorileriyle büyük ölçüde tutarlı görünmektedir. Özellikle, cinsiyet rolü teorileri, kadınların hissettiklerini ifade ederek ve üzerinde durarak deneyimlerinin duygusal yönlerine odaklanmayı tercih ettiklerini, erkeklerin ise bu tür duygusal deneyimleri bastırmayı veya onlardan uzaklaşmayı tercih ettiklerini öne sürmektedir (Nolen-Hoeksema, 2012). Bu görüşü destekler şekilde, bu çalışmada kızların kendilerini suçlama, ruminasyon veya felaketleştirme yoluyla duygularına veya olumsuz deneyimlerine odaklandıkları, erkeklerin ise olumlu yeniden odaklanma yoluyla dikkatlerini başka yöne çekmeyi tercih ettikleri bulunmuştur. Bu anlamda, mevcut bulguların (ergenlik öncesi) çocukların duygu düzenleme tercihlerinde cinsiyet rollerine göre bir eğilim gösterdiklerine dair ampirik kanıtlar sağladığı söylenebilir.

Son olarak, okul düzeyi ve cinsiyet arasındaki etkileşimler (hipotez 1c) beş bilişsel duygu düzenleme stratejisinin kullanımı ile ilişkili olarak incelenmiştir. Mevcut literatür, bazı uyumsuz duygu düzenleme stratejileri ve içe yönelim problemlerinde cinsiyet farklılıklarının ortaya çıkması açısından 11-14 yaş aralığına vurgu yapmaktadır (örn., Gutman ve Codioli McMaster, 2020; Jose ve Brown, 2008). Sonuçlar, ruminasyon ve olumlu yeniden odaklanma için hipotezi desteklemiş, erkek ve kızların ilkokulda benzer düzeyde ruminasyon ve olumlu yeniden odaklanma bildirmelerine rağmen, kızların ortaokul ve lisede daha fazla ruminasyon ve daha az olumlu yeniden odaklanma yaptıklarını göstermiştir. Yukarıda belirtildiği gibi, kadınlar ve erkekler duygularla ilgili toplumsal cinsiyet kalıp yargıları doğrultusunda duygu düzenleme stratejileri kullanma eğilimindedir (Nolen Hoeksema, 2012; Zimmerman & Iwanski, 2014). Benzer şekilde, Çalışma 1'in bulguları ergenlerin ortaokul düzeyinden itibaren toplumsal cinsiyet rollerine uygun olarak bazı duygu düzenleme stratejilerini diğerlerine tercih

edebileceklerini göstermektedir. Bununla bağlantılı olarak, toplumsal cinsiyet yoğunlaşma teorisi (Hill ve Lynch, 1983) ergenlik dönemindeki değişimlerle birlikte toplumsal cinsiyet rollerinin çocukların hayatında daha belirgin hale geldiğini ve ergenlerin toplumda kendilerine atfedilen toplumsal cinsiyet rollerine uyma konusunda daha fazla baskı hissettiklerini öne sürmektedir. Önceki çalışmalar göz önünde bulundurulduğunda (Broderick ve Korteland, 2002; Jose ve Brown, 2008), ruminasyon ve olumlu yeniden odaklanma ile ilgili olarak cinsiyet ve okul düzeyi etkileşimlerinin literatürle tutarlı olduğu sonucuna varılabilir.

### **Bilişsel Duygu Düzenleme ve Problem Davranışlar Arasındaki İlişkiye Yönelik Sonuçlar**

Ruminasyon haricindeki bulgular, daha önce alan yazında bildirilen bilişsel stratejilerin uyumlu ve uyumsuz stratejiler sınıflandırmasını büyük ölçüde desteklemiştir (Garnefski vd., 2001; Wytykowska vd., 2021). Buna göre, ilişkinin anlamlı olduğu durumlarda, pozitif yeniden değerlendirme ve pozitif yeniden odaklanma problem davranışlarla negatif yönde ilişkiliyken, kendini suçlama ve felaketleştirme problem davranışlarla, özellikle de içe yönelim davranışlarıyla pozitif yönde ilişkilidir. Bu anlamda, mevcut bulgular, kişinin kendisi, dünya ve gelecekle ilgili olumsuz atıflar içeren düşünce kalıplarının bireyleri depresyon gibi içe yönelim sorunlarına yatkın hale getirdiğini savunan bilişsel kuramla tutarlıdır (Beck, 1967). Aynı şekilde, deneyimlere atfedilen daha olumlu bilişler, bireylerin olumsuz durumlarla daha uyumlu bir şekilde başa çıkmalarına ve içe yönelim sorunlarını azaltmalarına yardımcı olduğu görüşünü desteklemektedir (Garnefski ve ark., 2005). Ancak, bu çalışmanın sonuçlarına göre, ruminasyon bu uyumlu ve uyumsuz stratejiler sınıflandırmasının dışında tutulmuştur. Yani, beklentilerin aksine, ruminasyon herhangi bir okul düzeyinde ne içe yönelim ne de dışa yönelim sorunlarıyla pozitif yönde ilişkili bulunmamıştır. Bazı araştırmacılar ruminasyonun kara kara düşünme (yani, ulaşılamayan standartlar ve durumun olumsuz yönleri üzerinde pasif bir şekilde durma) ve yansıtma (yani, mevcut duygu ve düşüncelerin nedenlerini analiz etme) olmak üzere iki bileşeni olduğunu ve bunların depresif ruh hali üzerinde farklı etkileri olduğunu göstermiştir (Treynor ve ark., 2003). Özellikle, kara kara düşünmenin aksine, ruminasyonun yansıtma alt türünün olumsuz ruh halini artırmadığına ve dolayısıyla depresyon gibi duygusal sorunlarla ilişkili olmadığına inanılmaktadır. Mevcut çalışmada, ruminasyonun hem uyumlu hem de uyumsuz diğer stratejilerle pozitif korelasyonu, iki faktörlü yapıyla ilgili bu argümana kısmi destek sağlasa da bu hipotezin ampirik olarak test edilmesi gelecekteki araştırmaları gerektirmektedir.

## ÇALIŞMA 2

### Giriş

Literatürdeki birçok çalışma hem uyumsuz bilişsel duygu düzenlemenin hem de depresyon gibi duygusal sorunların ergenlik döneminde dramatik bir artış gösterdiğine dair kanıtlar bulmuştur (Jose ve Brown, 2008). Uyumsuz duygu düzenleme ile ergenlik dönemindeki duygulanım bozuklukları arasındaki pozitif ilişki göz önüne alındığında (Cracco ve ark., 2017; Power ve Casey, 2015; Steinberg, 2005), ergenlerin psikolojik sağlığını iyileştirmek için ergenlik döneminde uyumsuz duygu düzenleme stratejilerinin öncüllerini belirlemek önemli görünmektedir. Bu bağlamda, önceki bulgular aile bağlamının duygu düzenleme gelişimi üzerindeki önemli rolünü vurgulamaktadır (Eisenberg ve ark., 1998; Morris ve ark., 2007). *Gelişimsel niş modeline* göre (Super ve Harkness, 1997), ebeveynlerin çocuk yetiştirme inançları ve davranışları, ebeveyn ve çocuğun etkileşimde bulunduğu sosyalleşme bağlamını düzenleyerek çocuk gelişimini etkiler. Ayrıca, model ebeveynlik inançlarının büyük ölçüde kültürel değerler tarafından düzenlendiğini ve ebeveynlere kültürel olarak arzu edilen çocuk sonuçlarına hangi ebeveynlik davranışları ile ulaşabileceklerine dair bir çerçeve sağladığını öne sürmektedir (Harkness & Super, 2006). Özellikle, birçok ampirik çalışma ebeveynlerin duygulara ilişkin inançlarının duygu sosyalleşmesinde ebeveynlik stratejilerini belirlediğini ve dolayısıyla çocukların duygusal anlamdaki işlevselliğini öngördüğünü ortaya koymuştur (Halberstadt ve ark., 2013; Trommsdorff ve Friedlmeier, 2010).

Bununla birlikte, ebeveynlik inanç ve davranışlarını duygusal gelişim açısından inceleyen önceki çalışmalar çoğunlukla bebeklik ve okul öncesi dönem yaş gruplarına odaklanmış, ancak ergenleri büyük ölçüde ihmal etmiştir. Ergenlikle birlikte ergenlerin sosyalleşme bağlamında ebeveyn dışı kurumlar öne çıksa da araştırmalar ebeveynlerin ergen çocukların duygu düzenleme gelişimini çeşitli şekillerde önemli ölçüde etkilemeye devam ettiğini göstermiştir (Morris ve ark., 2017). Ayrıca, bazı araştırmacılar ergenlik döneminin çevredeki sosyal uyaranların etkileri açısından özellikle hassas bir dönem olduğunu düşünmektedir (Blakemore ve Mills, 2014; Steinberg, 2005). Buna dayanarak, ergenler sosyalleşme bağlamlarında ebeveynlik davranışlarının yanı sıra ebeveynlik inançları gibi örtük kültürel mesajlardan daha da fazla etkilenebilirler. Bu nedenle, gelişimsel niş modelinin ergenlerin duygu düzenlemesiyle ilgili olarak test edilmesinin mevcut literatüre katkı sağlayacağı düşünülmektedir.

Bu anlamda, duyguların işlevleri ve anlamları kültürler arasında farklılık gösterdiğinden, farklı kültürlerden ebeveynlerin duygu yükleme stratejilerine ilişkin inançları da farklılık göstermektedir. Şöyle ki, toplulukçu bir yönelime sahip ebeveynlerin, çocuğa ilişkisel değerleri öğretmek için kullanılan utandırma stratejisi hakkında genellikle daha olumlu inançlara sahip olduğu görülmektedir (Fung, 1999). Bununla birlikte, ebeveynin utandırma



davranışlarının genellikle bireysellik odaklı ergenler tarafından olumsuz algılandığı ve ergenlerde optimal olmayan gelişimsel sonuçları öngördüğü önceki çalışmalarda rapor edilmiştir (Helwig ve ark., 2014; Smetana ve ark., 2021). Bu durum özellikle Türkiye gibi toplulukçu ebeveynlerin bireysellik odaklı çocuklara sahip olduğu bireycilik ve toplulukçuluk yönelimlerin bir arada görüldüğü kültürlerde geçerli olabileceği beklenmektedir (Mayer ve ark., 2012). Böyle bir durumda, utandırmaya ilişkin olumlu inançlara sahip ebeveynlerin ergen çocukları, ebeveynlerin eylemlerini daha reddedici ve psikolojik olarak kontrol edici olarak algılayabilir ve bu yolla, ebeveynlerin utandırmaya dair inanışları ergenlerde uyumsuz duygu düzenleme ile ilişkilendirilebilir. Temel olarak, çalışma 2 bu aracılık yolunu okul çağındaki bir örnekte incelemeyi amaçlamaktadır. Ayrıca, önceki çalışmalar duygusal gelişimde gelişimsel evrenin ve çocuğun cinsiyetinin önemli rolünü vurguladığından, önerilen modele bu iki değişkenin düzenleyici rolleri de dahil edilerek test edilmiştir.

Türkiye'de anneler birincil bakıcılar olarak kabul edildiklerinden ve dolayısıyla çocukların sosyalleşmesi bağlamında öne çıkan figürler olduklarından (Sunar ve Fişek, 2005), bu çalışmada özellikle annelerin inanç ve davranışları incelenmiştir. Söz konusu literatür ışığında aşağıdaki hipotezler formüle edilmiştir

- 1) Annelerin utandırmaya ilişkin olumlu çocuk yetiştirme inançlarının, kendini suçlama, ruminasyon ve felaketleştirme gibi uyumsuz bilişsel duygu düzenleme stratejileri ile pozitif yönde ilişkili olması beklenmiştir.
- 2) Annelerin utandırmaya dair olumlu inanışlarının algılanan anne reddi ve psikolojik kontrol ile pozitif ilişkili olması beklenmiştir.
- 3) Annelerin reddedici ve psikolojik olarak kontrol edici davranışlarının, kendini suçlama, ruminasyon ve felaketleştirme gibi uyumsuz duygu düzenleme stratejilerinin daha sık kullanılmasıyla pozitif ilişkili olması beklenmiştir.
- 4) Utandırmanın çocuk yetiştirmede etkili bir strateji olduğuna inanan annelerin daha fazla reddedici ve psikolojik olarak kontrol edici olarak algılanması; bu yolla kendini suçlama, ruminasyon ve felaketleştirme gibi uyumsuz duygu düzenleme stratejilerin daha sık kullanılması ile ilişkilendirilmesi beklenmiştir.
- 5) Ebeveynlik inançları ve duygu düzenleme stratejileri ile ebeveynlik davranışları ve duygu düzenleme stratejileri arasındaki ilişkide (ön)ergenlerin cinsiyetinin düzenleyici rolü açımlayıcı (keşifsel) olarak test edilmiştir.
- 6) Ergenlerin ilerleyen dönemlerinde, utandırmaya ilişkin inançların daha olumsuz algılanması ve duygusal gelişim üzerinde daha olumsuz bir etkiye sahip olması beklenmiştir. Buna göre, önerilen ilişkilerin ergenliğin ilerleyen dönemlerinde daha güçlü hale gelmesi beklenmiştir.

## Yöntem

### Katılımcılar

Çalışma 1 ile benzer şekilde katılımcılar Türkiye Aile, Çocuk ve Ergen Projesi'nden alınmıştır. Ancak, mevcut çalışmada yalnızca anne ve çocuk eşleştirilmiş verisi olan katılımcılar dahil edilmiştir. Buna göre, örnekleme ilkökul, ortaokul ve lise düzeylerinde sırasıyla 1051, 1955 ve 1397 anne-çocuk çifti bulunmaktadır. Okul düzeyine göre yaş ortalamaları ilkökul, ortaokul ve lise için sırasıyla 9.19, 11.98 ve 15.36'dır. İlkokul düzeyinde katılımcıların %49'u, ortaokul düzeyinde %54.7'si ve son olarak lise düzeyinde %55'i kızlardan oluşmaktadır.

### Veri Toplama Araçları

Annelerin utandırmaya ilişkin inanışları Çocuk Yetiştirme İnançları Ölçeği'nin 8-maddelik utandırma alt boyutu (Lieber ve ark., 2006) kullanılarak ölçülmüştür. Maddeler, çeviri-geri çeviri prosedürü kullanılarak Türkçe'ye çevrilmiştir. Mevcut örnekleme Cronbach alfa değerleri ilkökul, ortaokul ve lise düzeyleri için sırasıyla .84, .83 ve .82 olarak bulunmuştur. Anneden algılanan ebeveyn reddi 24-maddelik Ebeveyn Kabul-Ret Ölçeği (Rohner & Khaleque, 2005) kullanılarak değerlendirilmiştir. Toplam algılanan anne reddi puanı, dört alt ölçeğin (ebeveyn sıcaklığı/şefkati, düşmanlık/saldırganlık, ilgisizlik/ihmal ve ayırmamış reddetme) bileşik puanları alınarak hesaplanmıştır. Cronbach alfa değerleri ilkökul için .85, ortaokul için .92 ve lise için .94 bulunmuştur. Anneden algılanan psikolojik kontrol davranışları ise 10-maddelik çocuk bildirimli Psikolojik Kontrol Ölçeği (Barber, 1996) ile değerlendirilmiştir. Bu çalışmada Cronbach alfa değerleri ilkökul için .75, ortaokul için .81 ve lise için .83 bulunmuştur.

(Ön)ergenlerin uyumsuz bilişsel duygu düzenleme stratejileri çalışma 1'de kullanılan Bilişsel Duygu Düzenleme Ölçeği'nin kendini suçlama, ruminasyon ve felaketleştirme alt boyutları üzerinden değerlendirilmiştir. Her bir strateji için Cronbach alfa değerleri ilkökul, ortaokul ve lise düzeylerinde .70 ve .81 arasında olup kabul edilebilir değer aralıklarında bulunmuştur.

### İşlem

Mevcut çalışmanın örnekleme Çalışma 1'de bahsedilen "Türkiye Aile, Çocuk ve Ergen Projesi'nden alınmış, veri toplamaya ilişkin işlemler çalışma 1'de açıklanmıştır.

## Bulgular ve Tartışma

### Önerilen Modelde Doğrudan Yollara İlişkin Sonuçlar

Annelerin utandırmaya ilişkin olumlu tutumlarının (ön)ergenlerin kendini suçlama, ruminasyon ve felaketleştirme gibi uyumsuz stratejileri ile pozitif yönde ilişkili olması beklenmekteydi (hipotez 1). Ancak, mevcut bulguların bu hipotezi güçlü bir şekilde desteklemediği görülmüştür. Şöyle ki, annelerin ayıplamaya ilişkin inançları, çoğu okul

düzeyinde duyguları düzenlemenin uyumsuz yollarıyla büyük ölçüde istatistiki olarak ilişkili çıkmamıştır. Önceki çalışmalar, utanca daha olumlu anlamlar yüklenen kültürlerde, ebeveynlerin utandırma stratejisinin mutlaka olumsuz çocuk sonuçlarıyla ilişkili olmadığını göstermektedir (Cheah ve ark., 2019; Chiang, 2018; Fung ve Lau; 2012; Scharf ve Goldner, 2018). Benzer şekilde, bazı araştırmacılar, ebeveynliğe dair algılanan kültürel normatifliğin, belirli bir kültürdeki ebeveynlik davranışlarının gelişimsel sonuçlarını tahmin etmek için özellikle önemli olduğunu öne sürmektedir (Smetana, 2017). Mevcut bulgular bu araştırma çizgisi ile tutarlı görünmektedir. Yine de, beklenen ile paralel olarak, utancın çocuk yetiştirmede işlevsel olduğuna inanan annelerin ergen çocuklarının ortaokul düzeyinde daha fazla felaketleştirme kullandıkları bulunmuştur. Erken ergenlik döneminde, ergenlerin çevredeki sosyal ipuçlarına karşı daha duyarlı hale geldiği görülmüştür. Özellikle, bu dönemde akran değerlendirmeleri ve akran grupları tarafından kabul görme, erken ergenlerin merkezi kaygıları haline gelir (Blakemore & Mills, 2014). Ebeveyn disiplin stratejisi olarak, çocuklarında utanç duygusu uyandıran ebeveynler, çocuklarını akranlarıyla kıyaslama ve sosyal ceza korkusu uyandırma gibi çeşitli taktikler kullanmaktadır (Yu vd., 2005). Bu bağlamda, felaketleştirmenin olayın olumsuzluğuna ve olası en kötü sonuçlarına odaklanmak olarak tanımlandığı göz önüne alındığında (Chan vd., 2016; Garnefski ve Kraaij, 2018), bulgular utandırmanın etkililiğine inanan ebeveynler ergen çocuklarını sosyal krizleri felaketleştirici bir şekilde ele almaya daha açık hale getirebileceği şeklinde yorumlanabilir. Annelerin utandırmaya dair olumlu inançlarının algılanan olumsuz ebeveynlik davranışlarını öngörmesi beklenmekteydi (hipotez 2). Bu hipotez psikolojik kontrol için desteklenmemiş olsa da bulgular anne reddi için büyük ölçüde hipotezi desteklemiştir. Buna göre, annelerin utandırmaya ilişkin inanışları, ilkökul ve ortaokul düzeyinde daha yüksek düzeyde anne reddiyle ilişkilendirilmiştir. Mevcut sonuçlar, ebeveyn inançlarının sosyalleşme sürecinde ebeveynlik davranışlarını etkilediğini öne süren literatürle tutarlıdır (Super ve Harkness, 1997). Ebeveynler çocuklarında kültürel olarak tanımlanmış arzu edilen sonuçları elde etmek için ebeveynlik stratejilerini kültürel yönelimlerine göre ayarlama eğilimindedir (Bornstein, 2012; Darling ve Steinberg, 1993; Harkness ve Super, 2006). Buna dayanarak, kolektivist yönelimli kültürlerdeki ebeveynler, utancın birbirine bağımlı benliğin gelişimini desteklediğine ve çocuklarında sosyal uyum ve ahlaki korumaya hizmet ettiğine inandıkları için çocuk yetiştirmede utanç kullanımına daha olumlu duygular atfetmektedir (Fung vd., 2003; Mascolo vd., 2003). Önceki çalışmalar Türkiye'deki ebeveynlerin kişiler arası ilişkilerin sürdürülmesi ve sosyal uyum gibi bazı kolektivist değerlere önem verdiklerini göstermiştir (Kağıtçıbaşı, 2002). Ancak aynı zamanda, araştırmalar Türkiye'de bireycilik ve kolektivizm yönelimlerinde kuşaklar arası farklılıklar olduğunu, bireyci değerlerin genç kuşaklar tarafından daha fazla benimsendiğini bildirmiştir (Mayer vd., 2012). Dolayısıyla, utandırma

gibi geleneksel disiplin stratejileri Türkiye'deki genç nesiller tarafından olumsuz ebeveynlik olarak algılanabilir. Bu anlamda, bu çalışmada annelerin utandırma inançları ile algılanan anne reddi davranışları arasında bulunan pozitif ilişki bu görüşü destekler görünmektedir.

Son olarak, olumsuz ebeveynlik davranışları ile uyumsuz bilişsel duygu düzenleme stratejileri arasındaki bağlantıya ilişkin olarak, yüksek düzeyde anne reddi veya psikolojik kontrolü olan (ön)ergenlerin uyumsuz stratejileri daha sıklıkla kullanması beklenmekteydi (hipotez 3). Bulgular hipotezi yalnızca psikolojik kontrol için destekler nitelikte bulunmuştur. Buna göre, annenin psikolojik kontrolünün yüksek olması her üç okul düzeyinde de kendini suçlama, ruminasyon ve felaketleştirmenin daha fazla kullanılması ile ilişkilendirilmiştir. Araştırmacılar, ebeveynin psikolojik kontrolünün çocuğun özerklik, ilişkisellik ve yeterlilik gibi temel sosyo-duygusal ihtiyaçlarının ebeveyn tarafından karşılanmamasına yol açtığını ve böylece çocuğun uyumlu psikolojik işleyişini baltaladığını savunmaktadır (Soenens ve Vansteenkiste, 2010). Özellikle, yüksek psikolojik kontrole sahip anneler, çocukların bilişsel ve duygusal süreçlerine müdahale ederek kendi beklenti ve isteklerini empoze etmeye çalışırlar (Barber, 1994). Bu bağlamda, annelerin psikolojik kontrol taktikleri, (ön)ergenleri, olayları uyumsuz bir şekilde yansıtmayı ve sonuç olarak olaylara ve kendilerine daha olumsuz atıflarda bulunmayı içeren duygu düzenleme stratejilerini benimsemeye yatkın hale getirebileceği düşünülebilir.

#### **Önerilen Modelde Aracı Yollara İlişkin Sonuçlar**

Gelişimsel niş modeline (Super ve Harkness, 1997) dayanarak, annenin utandırmaya dair inanışları ile (ön)ergenlerin uyumsuz duygu düzenleme stratejileri arasındaki ilişkide olumsuz ebeveynlik davranışlarının aracı rolü incelenmiştir. Bu bağlamda, çocuk yetiştirmede utancın kullanımına ilişkin daha olumlu inançlara sahip annelerin çocukları tarafından daha reddedici ve psikolojik olarak kontrol edici olarak algılanması ve bunun da (ön)ergenlerde kendini suçlama, ruminasyon ve felaketleştirmenin daha fazla kullanılmasını öngörmesi beklenmekteydi (hipotez 4). Sonuçlar, ebeveynliğin aracı rolünün sadece anne reddi ve ilkökul seviyesi için istatistiksel olarak anlamlı olduğunu göstermiştir. Buna göre, beklenen ile uyumlu olarak, ön ergenler utandırmaya ilişkin olumlu inançlara sahip annelerini sıcaklık, şefkat ve ilgiden yoksun, aynı zamanda daha düşmanca ve cezalandırıcı olarak değerlendirmiştir. Ancak, daha sonra beklenenin tersine, annelerin ergenlik öncesi çocuklarına karşı sevecen davranışlarının yokluğu ve kayıtsız ve/veya düşmanca davranışlarının varlığı, uyumsuz varsayılan bilişsel duygu düzenleme stratejileri ile negatif olarak ilişkilendirilmiştir. Anne reddi ve uyumsuz düzenleme stratejileri arasındaki bağlantının yönü beklenmedik şekilde negatif olduğundan, hipotez 4 desteklenmemiştir.

Önceki çalışmalar ebeveynlerin duygular hakkındaki inanışlarının, çocuklarının duygusal deneyimlerine gösterdikleri ebeveynlik davranışlarına dair yol gösterici olduğunu bildirmektedir (Halberstadt et al., 2013; Morris et al., 2007). Bu anlamda, çocukların duygu düzenleme repertuarlarını da önemli ölçüde ebeveynlerinin olumsuz duygularına verdikleri tepkiler temelinde oluşturduğu düşünülmektedir. Ebeveynlerin çocukların duygusal uyarılmalarına karşılık olarak verdikleri olumsuz ve ilgisiz ebeveynlik tepkilerinin çocuğun olumsuz duygularını analiz etmeye ve anlamaya çalışmak yerine bunlardan kaçınmasına yol açtığı rapor edilmiştir (Eisenberg vd., 1997; Morris vd., 2007). Bu temelde, annelerin reddedici davranışları uyumsuz bilişsel duygu düzenleme stratejilerinin kullanımını da azaltabilir çünkü bu stratejiler çocukların olumsuz deneyimleriyle bilişsel olarak yüzleşmelerini ve analiz etmelerini gerektirir. Çalışmalar ilişkisellik yönelimli kültürlerde olumsuz duyguların sosyal uyumu sürdürmeye karşı bir tehdit olarak görülmesinden dolayı annelerin çocuklarında olumsuz duyguların ifadesini bastırmayı teşvik ettiklerini göstermektedir (Chen, 1995; Markus ve Kitayama, 1991; Parker vd., 2012). Buna göre, utanç gibi ilişkiyel duyguların değer gördüğü kültürlerde, anneler çocuklarının öfke gibi olumsuz duyguları ifade etmesine karşı daha reddedici tepkiler gösterme eğiliminde olduğu rapor edilmiştir (Cole ve ark., 2006). Özellikle ön ergenlik dönemi daha karmaşık ve bilişsel odaklı düzenleme becerilerinin edinilmesi için önemli bir gelişim dönemi olarak kabul edilmektedir (Garnefski vd., 2007; Stavish ve Lengua, 2023). Bu nedenle, ön ergenlik döneminin bilişsel stratejilerin edinilmesi anlamında özellikle hassas bir dönem olduğu düşünülebilir. Dolayısıyla, duyguları anneleri tarafından reddedilen ön ergenlerin olumsuz duygularını yönetmek için kendini suçlama, ruminasyon ve felaketleştirme gibi düşünce odaklı stratejilerden ziyade kaçınma odaklı uyumsuz stratejileri duygu düzenleme repertuarlarına ekleme olasılığı daha yüksek olabilir.

### **Önerilen Modelde Düzenleyici Yollara İlişkin Sonuçlar**

Alan yazında ebeveynlik ve gelişimsel sonuçlar arasındaki ilişkide çocuğun cinsiyetinin düzenleyici rolüne dair elde edilen tutarsız bulgular nedeniyle, mevcut çalışmada cinsiyetin düzenleyici rolü açıklayıcı (keşifsel) olarak test edilmiştir (hipotez 5). Buna göre, sonuçlar farklı okul seviyelerinde cinsiyet için üç anlamlı etkileşim etkisi göstermiştir. Bu anlamlı etkileşimlerden ikisi annelerin utandırmaya ilişkin inançları ile (ön)ergenlerin ruminasyonu arasında bulunmuştur. Diğer bir deyişle, annelerin utandırmaya ilişkin inançları ilkokulda sadece kızlar için daha düşük ruminasyon kullanımı ile ilişkilirken, lisede aynı yol sadece erkekler için anlamlıdır. Bu bağlamda, mevcut bulgular cinsiyete göre farklılaşan ebeveynlik etkilerinin gelişim evrelerine göre yön değiştirebileceğini düşündürmektedir. Daha önce de belirtildiği gibi, çocuk yetiştirmede utandırmanın etkili bir strateji olduğuna inanan anneler, utandırma stratejisini çoğunlukla çocuğun dikkatini ahlak dışı davranışlara çekmek ve kültürel

olarak ahlaki davranışları öğretmek için kullanılmaktadır (Fung, 2006; Mascolo vd., 2003). Bu mantık çerçevesinde, utandırma çocuğun olumsuz olaya olan dikkatini artırsa bile, çocuğun dikkatini olayla ilgili duygu ve düşüncelerinden ziyade davranışlarına çekmeye hizmet edebilir. Dolayısıyla, annelerin utandırma inançları, ruminasyon gibi düşünce ve duygulara odaklanmayı gerektiren düzenleme stratejilerinin kullanımını azaltabilir. Ancak, bu ilişki için bulunan cinsiyet ve gelişimsel evre farklılıkları, utandırmanın azaltıcı etkisinin yalnızca orta düzeyde ruminasyon için geçerli olabileceğini düşündürmektedir. Etkileşim grafiklerine göre, annelerin utandırma inanışlarından bağımsız olarak, ilkokuldaki erkekler düşük düzeyde ruminasyon bildirirken ("nadiren" ile "bazen" arasında), lisedeki kızlar nispeten yüksek düzeyde ruminasyon bildirmiştir ("genellikle" şikkına yakın). Yani, ruminasyon ilkokuldaki erkek çocuklar tarafından zaten düşük seviyelerde kullanıldığından, annelerin utandırma inanışlarının ruminasyon üzerinde azaltıcı bir etkisi olmamış, aksine hatta ruminasyon, belki de utandırma çocuğun dikkatini olumsuz olaya çektiği için, artan bir eğilim göstermiş olabilir. Öte yandan, ruminasyon bir duygu düzenleme stratejisi olarak lise düzeyindeki kızlarda hali hazırda yüksek oranda kullanıldığı için ebeveynin utandırmaya dair inanışlarının yukarıda bahsedilen olası azaltıcı etkilerine karşı daha dirençli olabilirler. Bununla birlikte, annelerin utandırmaya ilişkin inançlarının ortaokul düzeyinde hiçbir cinsiyet için ruminasyonla ilişkili bulunmadığı belirtilmelidir. Bu nedenle, annelerin utandırma inançlarının cinsiyetler ve gelişim evreleri arasında bilişsel duygu düzenleme stratejileri üzerindeki etkisi hakkında daha fazla ön görü kazanmak için gelecekte yapılacak boylamsal araştırmalara ihtiyaç duyulduğu sonucuna varılabilir.

Son olarak, gelişimsel evrelerin düzenleyici rolüyle ilgili olarak, utandırmanın daha büyük ergenler tarafından daha olumsuz algılanması muhtemel olduğundan (Helwig vd., 2014; Smetana vd., 2021), annelerin utandırmaya ilişkin inançlarının ve dolayısıyla olumsuz ebeveynlik davranışlarının ergenliğin ilerleyen evrelerinde uyumsuz stratejiler ile daha güçlü şekilde ilişkili çıkması beklenmekteydi (hipotez 6). Ancak, annelerin utandırmaya ilişkin inançları ilkokul ve ortaokulda algılanan anne reddi davranışlarıyla ilişkiliyken, lise düzeyinde ilişkili bulunmamıştır. Ayrıca, annelerin utandırmaya ilişkin inançları ile uyumsuz duygu düzenleme stratejileri arasındaki ilişkide anne reddinin aracı rolü yalnızca ilkokuldaki ergenler için anlamlıdır. Bu anlamda, mevcut sonuçlar hipotezi desteklememiştir. Bu konudaki beklenmedik sonuçları açıklayabilecek iki olası açıklama vardır. Birincisi, mevcut çalışmadaki annelere, çocukların yaş grubu belirtilmeden utandırmaya ilişkin görüşleri sorulmuştur. Yani, anneler utandırmanın sadece küçük çocukları disipline etmek için etkili bir strateji olduğuna inanıyor olabilirler. Nitekim Fung (2006), Çin gibi toplulukçu kültürlerde ebeveynlerin çocuklarına ahlaki değerleri öğretmek için utandırma stratejisine ilişkin daha olumlu tutumlara sahip olduklarını, ancak ebeveynlerin genellikle ergenlik çağındaki

çocuklarını toplum içinde utandırmaktan vazgeçtiklerini belirtmiştir. Bu mantık çerçevesinde, bu annelerin lisede ergenlik çağındaki çocuklarını utandırma olasılıkları daha düşük olduğundan, annelerin utandırma inançları bu okul düzeyinde olumsuz ebeveynlik davranışlarını yordamamış olabilir. İkinci olarak, önceki araştırmalar ebeveynlerin disiplin stratejilerinin çocukların psikolojik iyi oluşu üzerindeki etkilerini öngörmede algılanan kültürel normatifliğin önemini vurgulamıştır (Chiang, 2018; Smetana, 2017). Bu anlamda, utancın kültürel anlamının çocuklar tarafından anlaşılması ve içselleştirilmesi zaman alabilir. Bu nedenle, ebeveynin utandırması daha büyük yaşta ergenler tarafından Türk kültüründe daha normatif olarak algılanabilir. Sonuç olarak, bu çalışmadaki en büyük yaş grubu olan lise düzeyindeki katılımcılar utanma ve utandırmanın kültürel temsillerini daha fazla içselleştirmiş ve bunlara daha az olumsuz anlam yüklemiş olabilirler.

### **Sınırlıklar ve Gelecek Çalışmalara Öneriler**

Mevcut tezin bulgularını, sınırlılıklarını göz önünde bulundurarak yorumlamak yerinde olacaktır. Öncelikle, mevcut sonuçlar kesitsel verilerden elde edilmiştir. Kesitsel bir araştırma tasarımı kullanarak gelişimsel evrelerdeki farklılıkları incelemenin en büyük dezavantajlarından biri, elde edilen sonuçların gelişimsel düzeyden değil, farklı bireysel faktörlerden kaynaklanma olasılığıdır. Mevcut tezdeki büyük örneklem büyüklüğünün bireysel faktörlerden kaynaklanan rastgele hataları büyük ölçüde tolere ettiği düşünülse de, gelişim evrelerindeki farklılıkların yine de kohort etkisi gibi daha sistematik hatalardan etkilenebileceği unutulmamalıdır. Ayrıca, kesit tasarımından elde edilen eş zamanlı veriler, zamansal ve ileriye dönük tahminlere ilişkin yorumları sınırlamaktadır. Bu nedenle, bu tezde incelenen ilişkilerin gelecek çalışmalarda boyamsal olarak test edilmesi önerilmektedir. İkinci olarak, anneler çocuğun cinsiyetini ve gelişim evresini göz önünde bulundurmaksızın genel olarak utandırmaya ilişkin inançlarını bildirmişlerdir. Ancak, anneler farklı gelişim evrelerindeki veya cinsiyetteki çocukları utandırmaya yönelik farklı tutumlara sahip olabilirler. Eğer anneler bunlara dayalı olarak farklı inançlara sahipse, ebeveynlik davranışlarını buna göre ayarlamaları daha olasıdır. Gelecek çalışmaların, ebeveynlik inançlarının çocuğun bireysel özelliklerine göre değişip değişmediğini incelemesinin ebeveynlik inançları ve davranışları arasındaki ilişkiyi anlamada önemli katkı sağlayacağı düşünülmektedir.

### **Sonuç ve Uygulamaya Yönelik Çıkarımlar.**

Bu iki çalışmanın sonuçları, (ön)ergenlerin psikolojik işleyişine katkıda bulunmak için gelecekteki müdahale programlarında dikkate alınabilecek bir dizi destekleyici ve risk faktörünü ortaya koymuştur. Bu bağlamda, mevcut bulgular temelinde üç olası pratik çıkarım yapılabilir. İlk olarak, sonuçlar ortaokul ve lise seviyelerinde uyumsuz bilişsel duygu düzenlemenin arttığını ancak uyumlu olanların azalma eğiliminde olduğunu göstermiştir. Bu

örüntü özellikle kızlar için belirgindir. Bu okul seviyelerinde duygu düzenleme stratejileri ve problem davranışlar arasındaki anlamlı ilişki göz önüne alındığında, okullarda ergenlerin daha uyumlu bilişsel duygu düzenleme stratejileri kullanmalarını teşvik eden müdahale programlarına ihtiyaç vardır. İkinci olarak, sonuçlar Türkiye'deki annelerin önemli bir kısmının çocuk yetiştirmede utandırmanın kullanımına ilişkin olumlu tutumlara sahip olduğunu göstermiştir. Annelerin utandırmaya ilişkin olumlu inançlarının uyumsuz düzenleme stratejileriyle ilişkisi çoğu vaka için anlamlı olmasa da utandırmaya ilişkin inançlar ortaokulda felaketleştirmenin daha fazla kullanılmasını olumlu yönde yordamıştır. Ayrıca, annelerin utandırmaya ilişkin olumlu inançları, ilkokul ve ortaokulda daha yüksek düzeyde anne reddi ile ilişkili bulunmuştur. Bu nedenle, ebeveynler için utandırmanın okul çağındaki çocukları üzerindeki olası olumsuz etkileri hakkında eğitim programları uygulanabilir. Son olarak, sonuçlar annelerin psikolojik kontrolünün üç okul düzeyinde de (ön)ergenlerin tüm uyumsuz stratejilerini olumlu yönde yordadığını göstermiştir. Bu bulgu, ebeveynlerin psikolojik kontrol ve bunun gelişimsel sonuçlar üzerindeki olumsuz etkileri hakkında bilgilendirilmesi ve belki de ergen ve anneyi birlikte içeren müdahale programlarının geliştirilmesi ihtiyacını vurgulamaktadır.



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