

# The Exploration of Maternal Self-Efficacy: The Role of Childhood Traumas, Adult Attachment and Cognitive Flexibility\*

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## Article Info

## ABSTRACT

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Maternal self-efficacy is a crucial component of effective parenting. It enhances the mother's experience and has wide-reaching effects on the child's development, well-being, mother-child relationship, and overall family dynamics. Yet, the elements constituting maternal efficacy are poorly understood because of their complexity. Using four steps of hierarchical regression analysis within the parental self-efficacy theory framework, this study explored the predictive power of demographics, childhood trauma, adult attachment, and cognitive flexibility in understanding maternal self-efficacy. The study included 386 mothers with children aged 0–6 years who reside in Turkey. The findings showed that the overall model explained an 18% variation in maternal self-efficacy scores. Among the control variables, the mother's age displayed robustness, as it remained unaffected by the studied variables. At the same time, education and employment status do not have significant predictive power over maternal self-efficacy. The results of hierarchical regression analysis indicated that childhood trauma and adult attachment are predictors of maternal self-efficacy. However, their significance disappeared in the presence of cognitive flexibility. This finding suggests that, like cognitive flexibility, various contextual and personal factors may alleviate the negative impact of childhood traumas and insecure attachments. The findings might help design policies, interventions, and programs to enhance parental self-efficacy, which leads to improved parenting practices and better parent-child relationships and ultimately contributes to positive child outcomes.

## Annelik Öz-Yeterliliğinin İncelenmesi: Çocukluk Travmalarının, Yetişkin Bağlanmasının ve Bilişsel Esnekliğin Rolü

### Makale Bilgileri

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Annenin öz yeterliliği, etkili ebeveynliğin önemli bir bileşenidir. Annenin deneyimini zenginleştirir ve çocuğun gelişimi, iyi oluşu, anne-çocuk ilişkisi ve genel aile dinamikleri üzerinde geniş kapsamlı etkileri bulunmaktadır. Ancak, annelik yeterliliğini oluşturan unsurlar, karmaşıklıkları nedeniyle yeterince anlaşılmamıştır. Bu çalışmada, ebeveyn öz-yeterlilik teorisi çerçevesinde, dört aşamalı hiyerarşik regresyon analizi kullanılarak, demografik değişkenler, çocukluk travması, yetişkin bağlanması ve bilişsel esnekliğin annelik öz-yeterliliğini anlamadaki yordayıcı gücünü araştırılmıştır. Araştırmaya Türkiye'de ikamet eden ve 0-6 yaş arası çocuğu olan 386 anne dahil edilmiştir. Bulgular, genel modelin annelik öz-yeterlilik puanlarındaki %18'lik bir varyasyonu açıkladığını göstermiştir. Kontrol değişkenleri arasında, annenin yaşı, tüm modelde, incelenen değişkenlerden etkilenmeden yordayıcı gücünü korumuştur. Fakat, eğitim ve çalışma durumunun anne öz yeterliliği üzerinde anlamlı bir yordama gücü bulunmamıştır. Hiyerarşik regresyon analizinin sonuçları, çocukluk çağı travmasının ve yetişkin bağlanmasının anne öz-yeterliliğinin yordayıcıları olduğunu göstermiştir. Ancak bilişsel esnekliğin modele eklenmesiyle bu değişkenlerin yordayıcı güçlerini kaybetmiştir. Bu bulgu, bilişsel esneklik gibi çeşitli bağlamsal ve kişisel faktörlerin de çocukluk çağı travmalarının ve güvensiz bağlanmaların olumsuz etkilerini hafifletebileceğini göstermektedir. Bulgular, ebeveynlerin öz-yeterliliğini artırmaya yönelik politikaların, müdahalelerin ve programların tasarlanmasına yardımcı olabilir. Bu da ebeveynlik uygulamalarının iyileştirilmesini ve daha iyi ebeveyn-çocuk ilişkilerini destekleyecek; nihayetinde çocuğun gelişimi açısından olumlu çıktılarının oluşmasına katkıda bulunacaktır.

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## INTRODUCTION

Maternal self-efficacy is a significant aspect of parenting. It involves mothers' assessments and anticipations regarding their capacity to raise their children effectively (Montigny & Lacharite, 2005; Wood & Bandura, 1989). Maternal self-efficacy is associated with the mother's well-being and the quality of the caring relationship with her child (Fang et al., 2021; Scannell, 2021). Mothers with high self-efficacy experience fewer negative emotions like stress and depression and tend to adopt positive parenting behaviors (Aksoy & Diken, 2009; Cadwell et al., 2011; Kohlhoff & Barnett, 2013; Tedi & Gelfand, 1991). Their confidence in their mothering skills helps them manage parenting challenges effectively (Ardelt & Eccles, 2001; Hassall et al., 2005) and seek support when required (Raikes & Thompson, 2005). This positive maternal attitude leads to a nurturing home environment, promoting better cognitive, emotional, and social growth in their children. As a result, these children show improved self-regulation and fewer behavioral issues (Bates et al., 2020; Huang, 2008). Besides that, high maternal efficacy acts as a protective factor, mitigating the effects of pre- and postpartum depression (Dlamini et al., 2023; Goldstein et al., 2023) and playing a critical role in the initiation, continuation, and overall experience of breastfeeding (Hankel et al., 2019; Goldstein et al., 2023). On the contrary, low maternal self-efficacy is a potential factor contributing to unfavorable parenting practices and strained mother-child relationships (Albanese et al., 2019; Weaver et al., 2008). Consequently, it is important to understand the factors contributing to maternal self-efficacy levels.

The theoretical framework of this study is drawn from parental self-efficacy theory (Ardelt & Eccles, 2001; Bandura, 1977). Parental self-efficacy theory is a psychological framework that focuses on parents' beliefs and confidence in their ability to successfully fulfill their caregiver roles and effectively raise their children (Ardelt & Eccles, 2001), derived from Albert Bandura's broader concept of self-efficacy, which refers to an individual's belief in their ability to accomplish specific tasks or goals (Rybski, 2014). This theory acknowledges that parenting is a multifaceted and dynamic process influenced by several factors, including personal beliefs, past experiences, cultural norms, and external support systems (Ardelt & Eccles, 2001; Bandura, 1977). Considering this notion, this study selected independent variables based on findings from parental self-efficacy research. Namely, this study examined relations between demographic variables, childhood trauma, adult attachment, and cognitive flexibility in predicting maternal self-efficacy in a sample of 386 mothers with children aged between 0 and 6. By understanding these factors and their interactions, professionals can develop strategies to promote and enhance parental self-efficacy, leading to more effective parenting practices and better outcomes for mothers and children (Wittkowski et al., 2016).

### Demographics and Maternal Self-Efficacy

One factor affecting maternal self-efficacy is sociodemographic variables. These personal and contextual demographics might impact mothers' transition to parenthood, buffer or exacerbate the parental challenges, and in turn impair or repair mothers' self-assessment of their motherhood capabilities (Aksoy & Diken, 2009; Coleman, 1998). In this sense, demographics are explored in this current study as control variables.

There is contradicting evidence in the literature about the relationship between demographics and maternal self-efficacy. For example, while in some studies the employment status of mothers contributes to a mother's self-efficacy (e.g., Kotil, 2010), in other studies there was no significant relationship found between these two variables (e.g., Balat, 2014; Nebioğulları, 2019; Oskay, 2016; Seçer et al., 2008). The same contradicting findings apply to age (Aksoy and Diken, 2009; Kotil, 2010; Kurt and Aslan, 2020), education level (Bubić et al., 2021; Coleman & Karraker, 2000; Kurt & Aslan, 2020; Nebioğulları, 2019; Telef, 2013), marital status (Kotil, 2010), number of children (Brunton et al., 2020; Krieg, 2007; Kurt & Aslan, 2020), and income (Aksoy & Diken, 2009; Kurt & Aslan, 2020; Raikes & Thompson, 2005) of mothers. The contradicting findings in the literature show that more research is needed regarding maternal self-efficacy and demographic variables. The findings of this study might contribute to this discussion.

### **Childhood Traumas and Maternal Self-Efficacy**

Childhood traumas encompass adverse experiences that individuals may have faced during their early years, such as abuse, neglect, or other distressing events. Childhood traumas can have far-reaching effects in adulthood, and parenting is one of those. There is much empirical research conducted with mothers that reveals that mothers with a high score on childhood trauma scales have lower maternal self-efficacy (e.g., Brazeau et al., 2018; Cadwell et al., 2018; Irak & Parlar, 2019; Kuzu & K1sa, 2019). If early traumatic experiences are left unresolved during parenthood, the resulting trauma can have a negative impact on mothers' windows of tolerance and put their nervous system in survival mode, leading to increased agitation, fear, and anxiety.

Such emotional dysregulation in mothers can hinder their ability to respond patiently and empathetically to their children's needs, consequently affecting their perceptions of their parenting capabilities. In addition, childhood trauma histories make mothers prone to depression, which makes mothers emotionally unavailable to their children. Therefore, mothers' beliefs about their parenting are negatively constructed (Irak & Parlar, 2019; Brazeau et al., 2018).

### **Adult Attachment and Maternal Self-Efficacy**

Adult attachment refers to the emotional and interpersonal patterns that individuals develop based on their early experiences with caregivers (Sable, 2008). A mother's attachment experiences with her caregivers can shape her adult attachment style and affect her maternal self-efficacy. The interplay between adult attachment and maternal self-efficacy can be discerned when examining how attachment behaviors influence an individual's self-belief and outlook towards their child and their surroundings. In essence, the attachment patterns of a mother can significantly shape her confidence and perceived ability in her role as a parent. Recognizing and understanding mothers' attachment styles can shed light on strengths and potential hurdles in parenting.

Empirical studies highlight a significant connection between parental self-efficacy and attachment styles. For example, the Chen and Xu (2018) study revealed that mothers with high parenting competence displayed a secure attachment to their mothers. Similarly, Green et al. (2007) found that individuals who had a stable and secure attachment with their caregivers while growing up are likely to exhibit a more affectionate, understanding, and engaged parenting style compared to those who had an unstable attachment during their childhood. To sum up, the literature reveals positive correlations between parenting self-efficacy and a secure attachment style. On the other hand, insecure adult attachment styles are associated with low maternal self-efficacy (Lee and Koo, 2015). For example, the study by Caldwell et al. (2011) revealed the role of anxious adult attachment in mediating the relationship between childhood maltreatment and lower maternal self-efficacy. In other words, insecure adult attachment styles relate to negative self-representations and low self-perception; therefore, examining attachment styles is important in addressing the issue of parental self-efficacy. Briefly, self-efficacy is interconnected with mothers' life encounters, such as childhood traumas and attachment styles, and with these two forms of how they perceive caregiving, such as maternal self-efficacy (Brazeau et al., 2018).

### **Cognitive Flexibility and Maternal Self-Efficacy**

Cognitive flexibility entails the capacity to adjust one's thoughts and beliefs in response to changing circumstances (Canas et al., 2006). Individuals with this ability effectively navigate novel and complex scenarios, generate alternatives, and view challenging situations as manageable (Gülüm & Dağ, 2012). While those with strong cognitive flexibility are equipped to explore new communication methods, confront unfamiliar situations, and adjust their behavior to suit their needs, individuals with low cognitive flexibility struggle to do so (Bilgin, 2009; Martin & Rubin, 1995; Stahl & Pry, 2005). Cognitive flexibility encompasses three key dimensions: awareness of various possibilities, adaptability in handling new situations, and confidence in managing changing circumstances (Martin et al., 1998; Martin & Rubin, 1995). These dimensions of cognitive flexibility are critical to building maternal self-efficacy. Namely,

mothers have to adopt many unforeseen parenting challenges, learn a vast array of parental skills in a short time, and juggle multiple roles as caregivers, professionals, partners, and more. A mother with high cognitive flexibility will be more resilient and resourceful to take on these challenges confidently, which will eventually impact a mother's belief in her ability to parent her children effectively.

There are limited studies investigating the relationship between parental self-efficacy and cognitive flexibility. Saasati et al. (2020) conducted an experimental study involving 40 mothers with children aged 12–18. They implemented a step-by-step parenting training program and observed that cognitive flexibility also improved as maternal self-efficacy increased throughout the program. Another study involving 72 females and 29 males examined the link between parental self-efficacy and cognitive flexibility. It revealed that people with higher cognitive flexibility demonstrated greater trust in their abilities, better coping skills, and a higher sense of parental competence (Martin & Anderson, 2009).

### **This Study**

Parental self-efficacy empowers mothers to embrace their parenting responsibilities confidently (Cadwell et al., 2011; Montigny & Lacharite, 2005; Kohlhoff and Barnett, 2013; Wood & Bandura, 1989). This self-assurance in their role as mothers instills a sense of competency throughout their journey of motherhood. Consequently, through parental self-efficacy, mothers are better positioned to guide their children in navigating physical and emotional hurdles and foster a secure environment for them and their offspring (Scannell, 2021).

This current study argues that the foundation of a mother's ability to create such nurturing surroundings often stems from her own childhood experiences. Some factors, such as cognitive flexibility, can protect against childhood trauma and attachment wounds. Mothers with high cognitive flexibility might be better equipped to develop and apply adaptive coping strategies, generating diverse solutions to problems and leading to better outcomes in recovery from traumatic and adverse experiences (Demirtaş, 2020). Since cognitive flexibility helps in rethinking situations in a constructive way, mothers may see their early traumas and attachment problems as chances for personal growth instead of as setbacks. Therefore, it is vital to understand the interplay between a mother's parental self-efficacy and her childhood encounters, the attachment she cultivates within her surroundings, and their cognitive flexibility level.

In light of the conceptual and empirical considerations, this study uses hierarchical regression analysis to investigate the role of some demographic variables, childhood trauma, adult attachment, and cognitive flexibility, in predicting maternal self-efficacy. To the best of the researcher's knowledge, this is the first study to investigate the combined relationship of these variables as they relate to maternal self-efficacy. The findings can contribute to parental self-efficacy theory and benefit mental health and child development professionals collaborating with parents. Besides that, this finding could be helpful in the development of preventive and remedial intervention programs to support parents, mothers, and mothers-to-be.

This study included 386 mothers with children aged 0–6. This age range was chosen because it represents the most critical period in a child's physical, cognitive, and emotional development (Conkbayir, 2021). Given this, the parental self-efficacy of mothers with children in this age bracket significantly influences the child's developmental process compared to other stages of life.

## **METHOD**

### **Research Design**

In order to analyze the factors associating parental self-efficacy with mothers, this study employed multi-level modeling, a technique suitable for assessing the statistical contribution of individual predictors as they are incorporated into models (Lewis, 2007). This methodology allows for the evaluation of how much each predictor variable enhances the overall model's explanatory capacity through the measurement of incremental validity. This study was conducted to determine the predictive role of childhood traumas, attachment styles, and cognitive flexibility on parental self-efficacy (the dependent variable) after

## Study Group

The convenience sampling method was used to collect data from 400 mothers via an online questionnaire through Google Forms, which took about 25 minutes to complete. Participation was voluntary. During the time the study was carried out, the first author was employed as a psychological counselor at a preschool, which allowed her to connect with mothers of children between the ages of 0 and 6 through her professional network. Moreover, to expand the participant pool, the research announcement was shared in Facebook groups comprised of mothers with children in the same age range. Participants were informed about the research objective, format, and the scales' instructions. The collected data was screened for outliers using Mahalanobis distance values, and 14 samples were excluded from the analysis. The remaining analysis was based on 386 data points.

As seen in Table 1, among 386 participants, 109 (28.2%) were below the age of 30 and younger, 154 (39.9%) were between 31 and 35 years old, and 123 (31.9%) of them were 36 and older. In terms of educational level, 81 (21.0%) of them have a high school or lower education level, 249 (64.5%) of them have an undergraduate education degree, and 56 (14.5%) of them have a postgraduate education degree. Table 1 provides more details about the participant's demographic information.

*Table 1: Descriptive frequencies for demographic variables (n = 386)*

		Freq.	%
<u>Age</u>	Below 31	109	28.2
	31-35 age	154	39.9
	Above 35	123	31.9
<u>Education Level</u>	High school or lower	81	21.0
	Undergraduate	249	64.5
	Graduate	56	14.5
<u>The first childbearing age</u>	Below 26	99	25.6
	26-30 age	189	49.0
	Above 30	98	25.4
<u>Marital status</u>	Married	369	95.6
	Single	17	4.4
<u>Employment Status</u>	Employed	222	57.5
	Housewife	164	42.5
<u>Number of children</u>	1	230	59.6
	2	127	32.9
	More than 2	29	7.5
<u>Socioeconomic status</u>	Low	18	4.7
	Middle	198	51.3
	Upper middle	151	39.1
	Upper	19	4.9
TOTAL		386	100

## Research Instruments

### *Personal information form*

The researchers compiled a list detailing the participants' demographic data. This list included information such as education level, marital status, number of children, age at the birth of the first child, income, and employment status. Participants self-defined their socioeconomic status (SES).

### *Childhood traumas scale (CTQ -33)*

Bernstein et al. (1994) developed the Childhood Trauma Scales (CTQ-33) to measure an



individual's exposure to trauma during childhood. This 33-item survey was translated into Turkish and updated by Şar in 2019, with the revised version released in 2020. The scale's internal consistency, as measured by Cronbach's alpha coefficient, was found to be 0.87. The CTQ-33 uses a 5-point Likert scale for its questions, with response options ranging from "Always" to "Never." The CTQ-33 has six sub-factors: physical abuse, physical neglect, sexual abuse, over-protection, and emotional abuse (Şar et al., 2020). The scale can be used with its total score, which ranges from a minimum of 25 to a maximum of 150 and contains no questions scored in reverse. The Cronbach alpha coefficient for the scale ranged between .77 and .90 (Şar et al., 2020). In this study, Cronbach's alpha coefficient was calculated as .86 for the total score.

#### ***Parental self-efficacy scale (PSES)***

The scale designed to gauge parental self-efficacy for mothers with children between the ages of 0 and 6 was initially formulated by Coleman and Karraker in 2000. Kotil (2011) subsequently adapted it for the Turkish version. Comprising 20 items, respondents provide their feedback on a 6-point Likert-type scale, with choices spanning from "I totally disagree" to "I totally agree". Scoring is done between 1 and 6, but for reverse items, it is used as 6 to 1. The original iteration of this scale presented Cronbach's alpha value of .90. In the present research, the Cronbach's alpha was determined to be .80.

#### ***Experiences in close relationships questionnaire – I (ECRQ-I)***

Brennan and colleagues (1998) introduced the Experiences in Close Relationships Inventory to measure attachment-related anxiety and avoidance in intimate relationships. This tool contains 36 questions, and each sub-scale is measured with 18 items. Those scoring low on both sub-scales (those with low anxiety and avoidance) are classified as having secure attachment. Responses are given on a 7-point Likert scale. Respondents indicate how accurately each statement represents them, with choices spanning from 1 ("Never Agree") to 7 ("Strongly Agree").

The inventory was translated into Turkish by Sümer (2006). In this Turkish version, internal consistency for the subscales was noted as: .86 for Anxious Attachment, .87 for Avoidant Attachment, and .87 for Secure Attachment as per Sümer's findings. In the present research, internal consistency metrics were: .86 for Secure Attachment, .84 for Anxious Attachment, and .85 for Avoidant Attachment.

#### ***Cognitive flexibility scale (CFS)***

The Cognitive Flexibility Inventory was first crafted by Dennis and VanderWal (2010). Its Turkish adaptation was later undertaken by Gülüm and Dağ (2012). This scale includes 20 items, with responses gauged on a 5-point Likert scale. The cumulative scores on this scale can vary from 20, being the lowest, to 200 at its peak, where a higher score signifies a heightened level of cognitive flexibility. Gülüm and Dağ (2012) reported a Cronbach's alpha coefficient of 0.94 for the inventory. In the context of this research, the Cronbach's alpha coefficient stood at 0.90.

### **Data Analysis**

The current study utilized a relational screening model, which is used to discern the relationships between two or more variables and serves to identify both the presence and the magnitude of variations between two or more variables believed to be correlated (Büyüköztürk et al., 2008). The hierarchical regression was carried out to test the impact of the independent variables on the dependent variable. The first model only included demographic variables and other variables added to the hierarchy in the following order: Childhood Trauma (CT), Attachment Styles (AS), and Cognitive Flexibility (CF). Regression assumptions are tested before running the model to ensure unbiased parameter estimation. The variance increase factor (VIF) is below 10, the condition index (CI) is below 30, and the tolerance value (TV) is above 10; hence, there is no multicollinearity problem among independent variables. The Durbin-Watson score was 1.8, indicating no autocorrelation among the errors. The data used in this research was analyzed using SPSS 25.

### **Ethic**

This research was conducted in accordance with Helsinki Declaration and carried out after

## RESULTS

Table 2 presented the descriptive statistics of the dependent variable (Parental Self-efficacy- PSE) and three independent variables (Attachment Styles, Childhood traumas, and Cognitive Flexibility) in the study.

*Table 2. Descriptive statistics for the dependent and independent variables*

<i>Variables</i>	<i><math>\bar{X}</math></i>	<i>Sd</i>	<i>Min-Max</i>	<i>Skewness</i>	<i>Kurtosis</i>
Parental Self-Efficacy (PSE)	4.9	0.4	2.8-5.3	-0.08	0.14
Childhood Trauma (CT)	44.1	13.4	27.0-96.0	1.16	1.24
Attachment Styles (AS)					
<i>Secure attachment (SA)</i>	5.1	1.4	1.9 – 7.0	-0.31	-0.70
<i>Anxious attachment (AnA)</i>	3.7	1.1	1.3 – 7.0	0.24	-0.07
<i>Avoidant attachment (AvA)</i>	3.0	1.4	1.0 – 6.6	0.33	-0.78
Cognitive Flexibility (CF)	78.5	10.0	40.0– 100.0	-0.22	0.39

Correlation analysis was conducted by using Pearson's correlation coefficients in order to examine the relationship of parental self-efficacy with attachment, childhood traumas, and cognitive flexibility. The coefficients are presented in Table 3.

*Table 3. Pearson correlation coefficients between the dependent and independent variables*

<b>Scales and Sub-Scales</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>
1. Parental Self-Efficacy (PSE)	1					
2. Childhood Trauma (CT)	-.19*	1				
3. Secure attachment (SA)	.14*	-.25*	1			
4. Anxious attachment (AnA)	-.18*	.30*	-.05	1		
5. Avoidant attachment (AvA)	-.16*	.26*	-.63*	.33*	1	
6. Cognitive Flexibility (CF)	.33*	-.37*	.31*	-.41*	-.36*	1

\*p<.01

The correlation between PSE and other independent variables and its subscales is positive and statistically significant for SA, CF. The correlation between PSE and CTQ is negative and statistically significant (p <.01). There was a significant and negative correlation between parental self-efficacy and AvA, AnA, and CT.

### Hierarchical Regression Analysis

Hierarchical linear regression analysis was performed to determine to the extent the childhood traumas, attachment styles (secure, anxious, and avoidant attachment), and cognitive flexibility significantly predict their parental self-efficacy levels. The results are presented in Table 4.

*Table 4. Hierarchical regression analysis results on the prediction of mothers' parental self-efficacy*

Independent Variables	Model 1		Model 2		Model 3		Model 4	
	<i>B</i>	<i>p</i>	<i>B</i>	<i>p</i>	<i>B</i>	<i>p</i>	<i>B</i>	<i>p</i>
Constant	4 .29	0	4 .55	0	4 .58	0	3 .67	0
Age	-0.05	.013**	-0.05	.020**	-0.05	.012**	-0.05	.010**

Education	0.04	0.22	0.04	0.34	0.03	0.29	0.04	0.24
Marital Status (married)	-0.2	.04**	-0.19	.038**	-0.19	0.05	-0.19	.040**
Number of Children	-0.05	0.13	-0.06	0.091	-0.06	0.10	-0.07	.046**
Socioeconomic Status (SES)	0.08	.007*	0.08	.007*	0.07	.02*	0.05	0.06
Employment (at home)	-0.05	0.09	-0.08	0.054	-0.09	0.05	-0.08	0.07
Childhood Trauma (CT)			-0.01	.000*	-0.004	.016*	0.00	0.19
Avoidant attachment (AvA)					0.05	0.993	0.01	0.81
Anxious attachment (AnA)					-0.05	.013*	-0.02	0.38
Secure attachment (SA)					0.02	0.273	0.01	0.81
Cognitive Flexibility (CF)							0.01	.00*
R <sup>2</sup>	0.07		0.11		0.13		0.18	
F <sub>model</sub>	4.73*		6.27*		5.39*		7.32*	
ΔR <sup>2</sup>	0.07		0.04		0.02		0.05	
F <sub>change</sub>	4.96*		14.43*		3.01**		23.78*	

\* $p < 0.01$ ; \*\*  $p < 0.05$

Demographic variables such as age, marital status, income, number of children, and education level entered Model 1. Age, marital status, and SES have a statistically significant effect on parental self-efficacy, and the overall model explained 7% of the total variation ( $F(6,374) = 4.96$ ;  $p < .01$ ;  $R^2 = .07$ ). In Model 2, childhood trauma scores were added total variance explained increased to 11%. CT has a negative statistically significant effect on PSE ( $B = -0.01$ ;  $p < .01$ ). In Model 3, attachment styles (secure attachment, anxious attachment, and avoidant attachment) were added as independent variables to examine the predictive power on maternal self-efficacy. The result indicated an increase in the total variance explained by 2% ( $\Delta R^2 = .02$ ,  $p < 0.05$ ), and the model explained approximately 13 % of the total variance of parental self-efficacy ( $F(10,370) = 3.01$ ;  $p < .01$ ;  $R = .36$ ,  $R^2 = .13$ ). Based on the third model, AnA has a negative statistically significant effect on PSE scores. SA and AvA variables were not statistically significant predictors of parental self-efficacy levels (respectively,  $B = 0.02$ ;  $B = 0.05$ ;  $p > .05$ ).

The cognitive flexibility score was added as an independent variable in the Model 4. The result indicated an increase in the total explained variance by 5% ( $\Delta R^2 = .05$ ,  $p < 0.01$ ), and the overall model explained 18 % of the total variance of parental self-efficacy ( $F(11,369) = 23.78$ ;  $p < .01$ ;  $R^2 = .18$ ). The number of children ( $B = -0.07$ ;  $p < .05$ ), marital status ( $B = -0.19$ ;  $p < .01$ ), age ( $B = -0.05$ ;  $p < .01$ ), negative and cognitive flexibility ( $B = 0.277$ ;  $p < .01$ ) positive and statistically significant effect on PSE. It was found that CF is the only statistically significant factor affecting PSE after controlling for demographics. Namely, the higher the CF score of mothers, the higher the PSE scores.

## DISCUSSION, CONCLUSION, RECOMMENDATIONS

Using four steps of hierarchical regression analysis within the parental self-efficacy theory framework, the current study explored the predictive power of demographics, childhood trauma, adult attachment, and cognitive flexibility in understanding maternal self-efficacy. Demographics, namely age, education, marital status, number of children, SES, and mothers' employment, entered the model as control variables. The model suggests that education and employment status do not have predictive strength concerning maternal self-efficacy. On the other hand, the significance of marital status, SES, and number of children showed significance but did not stay consistent in the model in predicting maternal efficacy. The literature also presents mixed results regarding the influence of demographic factors on maternal self-efficacy. Further research is required to uncover the nuances and specific conditions where these relationships are consistent or vary.

Among the control variables, the mother's age showed a consistent association with maternal self-efficacy, as it was not influenced by the variables studied in the model. The findings of studies in the literature examining the relationship between maternal self-efficacy and age are not consistent. However, unlike other studies in the literature (e.g., Aksoy & Diken, 2009), maternal age and maternal self-efficacy



have a negative relationship in this study. Cultural factors can explain this finding. For example, traditionally, women in Turkey have been expected to start families soon after they get married. Therefore, being an older mother in this traditional context might be seen as unusual or stigmatized, negatively influencing a mother's self-efficacy.

Hierarchical regression results yielded that childhood trauma and anxious attachment were predictors of maternal self-efficacy, which is consistent with the previous findings (e.g., Brazeau et al., 2018; Caldwell et al., 2011; Irak & Parlar, 2019). However, they lost their significance in the presence of cognitive flexibility. This result indicates that, like cognitive flexibility, various contextual or personal factors might mitigate the adverse effects of traumas and attachment wounds. Mothers exhibiting substantial cognitive flexibility are likely more adept at creating and implementing adaptive coping mechanisms, allowing them to devise various solutions to challenges. This capacity can enhance their resilience, especially when recovering from traumatic experiences. The power of cognitive flexibility, which aids in cognitive reappraisal, enables mothers to reinterpret past traumatic events and attachment difficulties as opportunities for personal growth rather than hindrances.

The study's findings indicated that interventions and support systems focusing on enhancing cognitive flexibility have the potential to influence maternal self-efficacy positively. This is significant, as cognitive flexibility emerged as the most influential variable in predicting maternal self-efficacy. Considering that cognitive flexibility is a skill that can be developed over time with consistent practice and effort, community-based, easy-to-access opportunities such as art and creativity, physical exercise, and social interaction can be provided to mothers and mothers-to-be to enhance this skill. In a therapeutic setting, interventions that aim to increase cognitive flexibility by challenging and modifying maladaptive thought patterns can benefit those who have experienced poor self-efficacy. If mothers are equipped with tools to think adaptively and face challenges flexibly, they are more likely to experience successes that reinforce their confidence in parenting. Therapy and interventions that address trauma and attachment issues may also positively impact a mother's confidence in her parenting abilities.

Individual and family counseling can address challenges in maternal self-efficacy. Pre-school education institutions can promote parental cooperation with schools and counseling departments through tailored parenting activities. Educational institutions can conduct seminars on parental self-efficacy, childhood traumas, attachment styles, and cognitive flexibility, fostering awareness and understanding. Group counseling sessions can connect mothers with similar experiences, enhancing self-awareness and cognitive flexibility through shared activities. These initiatives collectively contribute to improving maternal self-awareness and cognitive flexibility.

To mitigate the negative influences on parental self-efficacy, policymakers can also take proactive measures. These include offering training and workshops for parents both before and after childbirth, utilizing technology to establish online and in-person parent schools, and disseminating informative content through news sources and social media. These resources can be accessible free of charge, and public awareness campaigns can be implemented in various settings, such as public health centers and maternity services. Tailored interventions addressing traumatic experiences, early life encounters, insecure attachments, and cognitive flexibility can be designed to elevate parental self-efficacy, mainly targeting parents from lower socio-economic backgrounds through professional support.

Finally, since maternal self-efficacy is associated with the well-being of both the mother and the child and is considered a significant predictor of the mother's caregiving competencies, it is crucial to understand the factors that influence maternal self-efficacy. However, the elements constituting maternal efficacy are poorly understood because of their complexity. Research in this area should continue to explore the mechanisms underlying the connection between demographic characteristics, the trauma history of mothers, adult attachment, cognitive flexibility, and maternal self-efficacy, aiming to provide insights for improving parenting outcomes and interventions.

The results of this study should be understood with its limitations in mind, as they may impact the

interpretation of the findings. First, despite the substantial number of participants in this study, the findings cannot be generalized to the entire mother population in Turkey due to the use of a convenience sampling method. Besides, it is important to note that the sample primarily consisted of participants with higher education degrees, introducing a potential bias that hampers the broader applicability of the findings. Future research can be designed to obtain more generalizable research outcomes.

Second, the current study does not permit the inference of causal relationships or the examination of processes over time. The connections between maternal self-efficacy and other independent variables in the study could be bidirectional. For example, when mothers believe they can manage parenting challenges, they are more likely to approach situations with an open mind and a problem-solving attitude. This perspective fosters cognitive flexibility as they adapt to the unpredictable nature of parenting. Conversely, having good cognitive flexibility can reinforce maternal self-efficacy because mothers who adapt and think flexibly are likely to have more successful parenting experiences. Due to the cross-sectional nature of this study's data, it is not possible to explore their reciprocal relationships. More methodically sound research designs may shed light on the causal connections between the study variables to deepen the understanding of maternal efficacy. Future studies might utilize techniques such as path analysis or a longitudinal design to uncover the complex relationships between the variables under study and incorporate methods beyond self-reporting to mitigate the risk of mono-method biases. Despite the limitations, this study provides a sound foundation for more in-depth examinations of maternal self-efficacy in the future.

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