

## The Relationship Between Preschool Children's Self-Regulation Skills and Their Mothers' Parental Attitudes

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### Note

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### ABSTRACT

The present study aimed to determine the link between self-regulation skills of preschool children and mothers' attitudes towards parenting. The research was performed with 392 mothers living in Hatay/Turkey with children aged 4-6. The data were collected using "The Self-Regulation Skills Scale for 4-6 year-old Children" and "The Parental Attitude Scale-Mother Form". The results indicate that girls have higher attention and behavioral regulation skills compared to boys. While children's working memory varies by age, it was seen that the order of birth did not change self-regulation scores. Parental attitudes are more negative among mothers aged 40 and over than those of younger ones, and mothers who completed primary education have lower levels of efficacy perceptions and show less affection to their children compared with high school and higher education graduates. A moderate positive correlation was discovered between the self-regulation skills of children and mothers' parental attitudes. The results are discussed within the scope of the related literature and recommendations are offered.

### KEYWORDS

Preschool children; self-regulation skills, motherhood; parental attitudes.

## INTRODUCTION

The preschool duration is a critical period in the child's development, and some factors, such as the child's innate characteristics and environmental factors, affect the development during this period (Tuzcuoğlu et al., 2019). The environmental factors are closely related to development. The most important environment in the preschool period is the family. Families, as the first social environment, prepares children for life and integrate them into society by guiding them socially, emotionally, physically and cognitively from the moment they are born (Kandır & Alpan, 2008; Özaslan et al., 2021). Many elements related to family such as growing up in a safe, loving family environment and the health and education opportunities provided to children have an important role in their development. Characteristics such as agreement, adaptation, cooperation and commitment, which are important in human relations, are acquired in family environment. Every event witnessed and observed by children in the family environment forms the basis for the behaviors that children will exhibit in their life (Kaya et al., 2012; Özaslan et al., 2021).

From the moment a child is born, he/she starts to imitate the people he/she communicates with, especially his/her family. In this way, in addition to behaviors such as love, respect, and solidarity, self-regulation skills, which are also known as adaptive skills that enable them to control their actions, cognitions, emotions, and even development, are first acquired in the family environment (Çiftçi Topaloğlu, 2013; Ertürk Kara, 2013). Self-regulation skill is an important skill that affects social life as well as individual life (Bayındır & Biber, 2019; Blair and Raver, 2015; Tozduman Yararlı and Güngör Aytar, 2017). The individuals with self-regulation can distinguish the right and wrong behaviors for themselves and society and behave appropriately (Erol & Ivrendi, 2018). Self-regulation, which starts with life, is expressed as a skill that enables people to adapt to the environment and supports their development (McClelland et al., 2018). Self-regulation also forms the basis for many developmental skills, especially academic skills. There are various statements that self-regulation skills, which are mostly associated with social developmental skills, are associated with cognitive, emotional and linguistic development (Blair, 2002; Işıksolu Aysel, 2020). According to these statements, self-regulation is an extensive concept including processes like adaptation, prevention of maladaptive behaviors, behavior, emotion, and attention control and delaying pleasure, storing and remembering information, and expressing emotions (Ertürk Kara et al., 2018; Shonkoff & Phillips, 2000). In general, self-regulation refers to the control and regulation of the individual's behavior, attention, impulses, emotions and thoughts (Pintrich & De Groot, 1990; Vohs Baumeister, 2004; Zimmerman, 2000).

Self-regulation includes cognition, behavior and emotion systems that overlap and interact with each other (Ertürk Kara et al., 2018). Cognitive regulation includes attention; skills such as being ready, being able to pay attention, maintaining attention and ignoring distracting stimuli to act towards the goal and coordinating attention while completing tasks are parts of cognitive regulation (Bronson, 2019). Behavior regulation dimension includes situations such as the individual's planning before performing a behavior, being able to control his/her impulses

and reactions (Bodrova & Leong, 2017). Behavioral regulation skills, considered a crucial dimension of self-regulation, are also important in children's adaptation to school and readiness (Ertürk Kara et al., 2018). Emotion regulation, the other element of self-regulation, is the ability to adjust and control the intensity of emotions such as sadness, joy, excitement, fear, and anger (Kopp, 2002). In addition to the skills such as literacy, counting skills and skills of performing operations that are deemed necessary for academic achievement, self-regulation plays a crucial role in academic achievement by allowing children to control themselves by organizing behavior, emotion, and cognition (Ertürk Kara et al., 2018). Studies have demonstrated that self-regulation has a significant relationship with skills such as independent learning skill, game and problem solving skills in preparation for academic life (Blair & Razza, 2007; Calkin & Fox, 2002; Erkan & Sop, 2018). Children with developed self-regulation skills, perform conscious behaviors. It is possible for children to proceed with steps towards their goal, to focus on their goal by coping with obstacles, and to remember the acquired information with high self-regulation skills (Bodrova & Leong, 2017).

An important factor in supporting self-regulation skills is the social environment to which they belong. The social environment includes concepts such as the views of adults around children about them, their behavior and attitude towards children, and the formation of a social atmosphere that supports children's development. Children's contact with their social environment, primarily with their parents, effectively develops and supports their self-regulation (Bronson, 2019; Ertürk Kara et al., 2018). The primary element to be considered when interacting with the social environment is to be delicate to children's and parents' cares and needs have the primary role within this element. Children, who are treated with sensitivity by their caregivers or parents, can grow up to be individuals with fewer behavioral problems in the future, perform attention and impulse control, and provide self-motivation (Bernier et al., 2010; Bronson, 2019; Kochanska et al., 2009).

For children spending most of the time with their parents at home, parents' knowledge and abilities about child education and their competence in raising children are important for self-regulated development of children (Bridgett et al., 2018; Büyüктаşkapu 2012; Öztürk, 2017; Öztürk & Giren, 2015). Accordingly, parents should first have sufficient knowledge about child care and education and should have the ability and competence to apply their knowledge. In addition, parents should be aware of their effect on the development and behavior of the children and have positive attitudes and beliefs in this regard. These are associated with the concepts of parental attitudes and self-competence in parenting tasks (Montigny & Lacharite, 2005; Seçer et al., 2008). Parents' views on parenting, parenting practices, perceptions of parenting and parenting competence indicate their parental attitudes, which includes all of these (Çetin, 2017). The general parental attitudes are evaluated in three sub-dimensions: parental competence perceptions of parents, their care in parenting, and their satisfaction with parenting (Çetin & Avcı, 2022). Perception of parenting competence is expressed as perceptions and beliefs of parents about their own capacities regarding their parenting role (Feliciano, 2005).

Parental care is the willingness to parenting, and a relationship exists between the willingness of mothers to parenting and the child's development and behavior. Mothers who are willing and interested in parenting can be more sensitive and conscious in the child-rearing process (Maden, 2019; Rogers & Matthews, 2004). Parenting satisfaction is expressed as the pleasure and satisfaction of being a parent (Brown et al., 2018). According to Maden (2019), the more parents are pleased with the role of parenting, the more satisfied they are with parenting.

In accordance with all these explanations, assuming that children consume time mostly with their mothers, it is considered that there is a connection between the self-regulation skills of children and the mothers' attitude towards parenting, perception of competence towards parenting, their thoughts and feelings about parenting and the behaviors they exhibit accordingly. Based on this idea, it is vital to investigate the relationship between the self-regulation skills of preschool children and mothers' parental attitudes with this research.

With this study, the response is desired to the question, "Is there a relationship between the self-regulation skills of preschool children and mothers' parental attitudes?" In addition, responses to the next sub-problems were pursued:

- Do preschool children's self-regulation skills differ significantly according to their gender?
- Do preschool children's self-regulation skills differ significantly according to their age?
- Do preschool children's self-regulation skills differ significantly according to children's birth order?
- Do the attitudes of mothers towards parenting differ significantly according to their age?
- Do the attitudes of mothers towards parenting differ significantly according to the education level of mothers?
- Is there a relationship between mothers' parental attitudes and children's self-regulation?

## METHOD

### Research Model

The correlational survey model, one of the quantitative research methods, was utilized in the study. This model seeks to describe the past or a situation that still exists as it is. It is employed to specify the connections between research variables and to obtain clues in cause-effect relationships (Karasar, 2016). Therefore, it is considered the most appropriate model for examining the children's self-regulation skills-mothers' parental attitudes relationship.

### Study Group

The study group consists of 784 people, 392 children in the 48-72-month age group having preschool education at institutions affiliated with the Ministry of National Education in Hatay during the spring semester of the 2020-2021 academic year, and 392 mothers of these children. The demographic data of the participants are presented in Table 1 and Table 2.

**Table 1.** Demographic Characteristics of Children Participating in the Study

Variables	Groups	n	%
Gender	Girl	191	49
	Boy	201	51
Age	47-53 months	109	28
	54-60 months	87	22
	61-67 months	110	28
	68-74 months	86	22
Birth Order	1st child	188	48
	2nd child	133	34
	3rd child and later	71	18
Total		392	100

As demonstrated in Table 1, 49% of 392 children participants are girls and 51% are boys. When the age groups of the children are investigated, it is observed that 28% are 47-53 months old; 22% are 54-60 months old; 28% are 61-67 months old and 22% are 68-74 months old. In the examination of the children's birth order characteristics, it is observed that 48% are the 1<sup>st</sup> child, 34% are the 2<sup>nd</sup> child and 18% are the 3<sup>rd</sup> child and later.

**Table 2.** Demographic Characteristics of the Mothers Participating in the Study

Variables	Groups	n	%
Age	At the age of 25 and below	41	11
	26-30 years old	125	32
	31-35 years old	133	34
	36-39 years old	56	14
	40 years and above	37	9
Education Level	Primary School	64	16
	Middle School	81	21
	High School	108	28
	Associate Degree	32	8
	Undergraduate	107	27
Total		392	100

Table 2 demonstrates the distribution of ages belong to 392 mother participators as follows: 11% of the participating mothers are 25 years old and below; 32% are 26-30 years old; 34% are 31-35 years old; 14% are 36-39 years old and 9% are 40 years old and above. When we examine the information about the education levels of mothers; 16% of 392 mothers are at primary school level; 21% are at secondary school level; 28% are at high school level and 27% are at undergraduate level.

### Data Collection Tools

The data of this study were gathered by applying Erol and Ivrendi's (2018) (mother form) self-

regulation skills scale for children at the age of 4-6 years, and Gibuad-Wallston and Wandersman's (1978) parental attitude scale, which was adapted to Turkish by Seer, eliköz and Yaşa (2008). Demographic data belong to children and mothers was acquired through a personal information form.

### **Personal Information Form**

The self-developed form includes questions related to the demographic characteristics of children and parents. For demographic information about the mother, there are questions about age and education level. For demographic information about children, questions including gender, age, birth order and whether they have their own room were included. This form was filled out by mothers.

### **Self-Regulation Skills Scale for 4-6-Year-Old Children (Mother Form)**

Erol and Ivrendi's (2018) scale was used to determine the self-regulation skills of children aged 4-6 years based on mothers' opinions. The ratings of the 5-point Likert-type scale belong to 20 items are as follows: "1-Never, 2- Rarely, 3- Sometimes, 4- Mostly, 5-Always". Participants get maximum 100 points and minimum 20 points from the scale. A high score from the scale explains that children's self-regulation is also high. The scale has four sub-dimensions: "Attention, Working Memory, Preventive Control-Emotion, Preventive Control-Behavior". The scale's Cronbach Alpha internal consistency coefficient (CA) was determined as 0.90 for the overall scale (Erol & Ivrendi, 2018). The CA of the scale and its sub-dimensions representing children's self-regulation skills are presented in Table 3.

**Table 3. Results of SRSS Reliability Analysis**

Scale/Sub-dimensions	Cronbach Alpha ( $\alpha$ )	Number of Items
SRSS	0.902	20
AS	0.783	6
WMS	0.841	5
PCBS	0.842	5
PCES	0.807	4

SRSS = Self-Regulation Skills Scale, AS=Attention Sub-Dimension, WMS =Working Memory Sub-Dimension

PCBS=Preventive control behavior sub-dimension, PCES=Preventive control emotion sub-dimension

### **Parenting Attitude Scale**

Seer, eliköz and Yaşa's (2008) study tested validity and reliability of the scale developed by Gibuad-Wallston and Wandersman (1978). The scale was prepared as 16 items as in its original form and contains three sub-dimensions: "parental competence perception, parental care and parental satisfaction". The scale includes the process of revealing mothers' perceptions of themselves and parental perceptions based on their experiences of parenting. It is rated as 5-point Likert type and categorized as "1-strongly disagree, 2- disagree, 3- Neutral, 4-Agree, 5-Strongly agree". Participants score the items between 1-5 (Seer et al., 2008). Participants can

get minimum 16 and maximum 80 points from the parental attitudes scale. Considering the total scores, it was discovered that mothers with high scores have a positive parental attitude, while those with low scores have a negative parental attitude (Seçer et al., 2008). The CA belongs to the scale and its sub-dimensions obtained using the data of the current research are figured in Table 4.

**Table 4.** PA Scale Reliability Analysis Results

Scale/Sub-dimensions	Cronbach Alpha ( $\alpha$ )	Number of Items
PAS Total	0.771	16
CPS	0.658	7
CS	0.513	2
SS	0.599	7

PAS= Parental Attitude Scale; CPS= Competence Perception sub-dimension; CS= Care sub-dimension; SS=Satisfaction sub-dimension

As seen in Table 4, the reliability coefficient ( $\alpha$ ) of the general scale is 0.771. Moreover, the reliability of the competence perception sub-dimension was 0.658; the reliability of the care sub-dimension was 0.513, and the reliability of the satisfaction sub-dimension was 0.599.

#### **Data Collection and Ethical Considerations**

This study was examined by the Non-Interventional Clinical Research Ethics Committee of Burdur Mehmet Akif Ersoy University on January 6, 2021 and approved by decision numbered GO 2021/53. For conducting the research with the mothers of the children who are having preschool education at institutions affiliated to the Ministry of National Education in Hatay in the 2020-2021 academic year, an approval letter was obtained from the Governorship of Hatay. After having the obligatory permissions for the research, the data gathering tools were initially applied face-to-face by receiving a Voluntary Participation Form from the parents. Then, due to the closure of the schools during the global pandemic, the mothers were contacted online and the data gathering tools were obtained from the mothers through the online survey.

#### **Data Analysis**

The data were transferred to the computer environment and the statistical analysis was performed via SPSS 22.0 software. The variables' normality assumption was checked by examining the kurtosis-skewness values. Based on the skewness and kurtosis values of the self-regulation skills scale for children at the age of 4-6 years, the scale (-.693;1.445), attention sub-dimension (-.560; .766), working memory sub-dimension (-1.020; 1.807), the preventive control-emotion sub-dimension (-.476; 1.03) and the preventive control-behavior sub-dimension (-.235; -.366) were assumed to have a normal distribution. Parental attitude scale (-.118; -.238), its competence perception sub-dimension (-.629; 1.668), care sub-dimension (.056; -.182), satisfaction sub-dimension (.143; -.099) were assumed to have a normal distribution. The fact that these values are between  $\pm 2$  is considered as the data are normally distributed (Field,

2009). In questioning the difference between groups, independent samples t-test was applied for paired groups (gender) and one-way analysis of variance (ANOVA) was utilized for the groups of three and more (age, birth order, maternal age, maternal education level, number of children). Bonferroni, a post-hoc test, was preferred to determine the origin of the difference. Pearson Moments multiplication coefficient values were calculated to estimate the preschool children's self-regulation skills-mothers' parental self-competence perceptions relationship. The significance level for statistical analysis was accepted as 0.05.

### FINDINGS

The scores acquired from the sub-dimensions and the overall scale are shown in Table 5 to specify the preschool children's self-regulation skills.

**Table 5.** *Distribution of Descriptive Values Regarding Self-Regulation Skills*

Self-Regulation	n	$\bar{x}$	s
SRSS	20	73.45	11.21
AS	6	22.08	3.72
WMS	5	20.79	3.24
PCBS	5	18.49	3.77
PCES	4	12.07	3.59

SRSS = Self-Regulation Skills Scale, AS=Attention Sub-Dimension, WMS =Working Memory Sub-Dimension  
PCBS=Preventive control behavior sub-dimension, PCES=Preventive control emotion sub-dimension

According to Table 5, the scores related to the self-regulation skills scale and its sub-dimensions are ( $\bar{x}$ = 73.45; 22.08; 20.79; 18.49 and 12.07), respectively. Since the maximum score on the scale is 100, it is possible to indicate that the children's self-regulation skills are at a good level.

It was examined whether the preschool children's self-regulation skills varied by gender. The descriptive values of the variables and the findings relevant to the independent sample t-test for significance are presented in Table 6.



**Table 6.** Independent Sample t-test Results of SRSS and its Sub-Dimensions Based on Gender Variable

Self-regulation	Gender	n	$\bar{x}$	s	sd	t	p
SRSS	Girl	191	74.69	10.20	392	2.144	<0.05
	Boy	201	72.27	12.00			
AS	Girl	191	22.50	3.54	392	2.154	>0.05
	Boy	201	21.69	3.84			
WMS	Girl	191	20.82	3.20	392	.140	>0.05
	Boy	201	20.77	3.29			
PCBS	Girl	191	18.57	3.49	392	.400	>0.05
	Boy	201	18 (41)	4.02			
PCES	Girl	191	12.80	3.26	392	3.957	<0.05
	Boy	201	11.38	3.77			

SRSS = Self-Regulation Skills Scale, AS=Attention Sub-Dimension, WMS =Working Memory Sub-Dimension  
PCBS=Preventive control behavior sub-dimension, PCES=Preventive control emotion sub-dimension

As Table 6 indicates, a statistically significant difference was revealed between the groups in terms of preschool children's self-regulation skills by gender [ $t_{(392)} = 2.144$ ,  $p < 0.05$ ]. It can be stated that there is a significant difference in children's self-regulation skills in support of girls. It was found in examining the scores of the children from the AS and PCES sub-dimensions that there was a significant difference based on gender. This differentiation is also in support of girls.

The descriptive values regarding whether the preschool children's self-regulation skills differ by age and the results of the ANOVA made for significance are demonstrated in Table 7.

Table 7 indicates that there is no statistically significant difference between the total scores of preschool children's self-regulation skills and the age variable [ $F_{(3,388)} = 1.762$ ,  $p > 0.05$ ]. While no significant difference was found in the self-regulation skills of children according to the scores they received from the sub-dimensions of SRSS, PCES and PCBS, a significant difference was found in the WMS based on age [ $F_{(3,388)} = 2.757$ ,  $p < 0.05$ ]. This differentiation is between 68-74 month old children and 54-60 month old children and it is in support of 68-74 month old children.

The results of the ANOVA performed for the descriptive values and significance regarding whether the children's self-regulation skills vary according to the order of birth are presented in Table 8. Table 8 clearly demonstrates that no statistically significant difference was found based on the birth order variable of children's self-regulation skills, [ $F_{(2,389)} = .192$ ,  $p > 0.05$ ].

**Table 7.** Descriptive Values and ANOVA Results of Self-Study Scale and its Sub-Dimensions by Age Variable

Self-regulation	Age	n	$\bar{x}$	s	V.K.	K.T.	Sd	CM	F	p	Difference
SRSS	47-53 months	109	72.17	11.48	g a	660.565	3	220.188	1762	>0.05	
	54-60 months	87	72.71	10.67							
	61-67 months	110	73.56	12.19	G.i.	48498.698	388	124,997			
	68-74 months	86	75.69	9.86							
AS	47-53 months	109	21.58	4.09	g a	49.398	3	16,466	1.191	>0.05	
	54-60 months	87	22.00	3.28							
	61-67 months	110	22.33	3.68	G.i.	5362.477	388	13.821			
	68-74 months	86	22.50	3.66							
WMS	47-53 months	109	20.76	3.32	g a	86.061	3	28.687	2.757	<0.05	4>2
	54-60 months	87	20.26	3.07							
	61-67 months	110	20.61	3.61	G.i.	4037.019	388	10.405			
	68-74 months	86	21.61	2.67							
PCBS	47-53 months	109	18.48	3.76	g a	31.339	3	10.446	.732	>0.05	
	54-60 months	87	18.36	3.46							
	61-67 months	110	18.20	4.13	G.i.	5536.639	388	14.27Q			
	68-74 months	86	18.98	3.61							
PCES	47-53 months	109	11:33	3.45	g a	93.671	3	31.224	2.437	>0.05	
	54-60 months	87	12:08	3.63							
	61-67 months	110	12:40	3.77	G.i.	4972.033	388	12.815			
	68-74 months	86	12:59	3.41							

SRSS=Self-Regulation Skills Scale, AS= Attention Sub-Dimension, WMS=Working Memory Sub-Dimension PCBS= Preventive control behavior sub-dimension, PCES=Preventive control emotion sub-dimension

**Table 8.** SRSS Scale and Sub-Dimensions and Descriptive Values and ANOVA Results Based on Birth Order Variable

Self-regulation	Sibling	n	$\bar{x}$	s	V.K.	K.T.	sd	CM	F	p
SRSS	1st child	188	73.46	9.37	g a	48.438	2	24.219	.192	>0.05
	2nd children	133	73.09	12.90						
	3rd child and later	71	74.11	12.36	G.İ.	49110.824	389	126.249		
AS	1st child	188	22:01	3.51	g a	11.345	2	5.673	.409	>0.05
	2nd children	133	22.00	3.90						
	3rd child and later	71	22/45	3.93	G.İ.	5400.530	389	13.883		
WMS	1st child	188	20.95	3.05	g a	18.397	2	9.198	.872	>0.05
	2nd child	133	20.49	3.58						
	3rd child and later	71	20.94	3.07	G.İ.	4104.682	389	10.552		
PCBS	1st child	188	18.56	3.28	g a	3.489	2	1.744	.122	>0.05
	2nd child	133	18.36	4.16						
	3rd child and later	71	18.54	4.23	G.İ.	5564.488	389	14.305		
PCES	1st child	188	11 93	3.21	g a	7.857	2	3.928	0.302	>0.05
	2nd child	133	12.23	4.01						
	3rd child and later	71	12.16	-3.78	G.İ.	5057.847	389	13.002		

SRSS = Self-Regulation Skills Scale, AS=Attention Sub-Dimension, WMS =Working Memory Sub-Dimension PCBS=Preventive control behavior sub-dimension, PCES=Preventive control emotion sub-dimension

The scores reached from the scale and the sub-dimensions in to determine their maternal parental attitudes are figured in Table 9.

**Table 9.** *Distribution of Descriptive Values Regarding Parental Attitudes*

Parental Attitude	n	$\bar{x}$	s
PAS	16	65.15	5.45
CPS	7	28.13	3.22
CS	2	8.13	1.01
SS	7	28.88	2.46

PAS= Parental Attitude Scale; CPS= Competence Perception sub-dimension; CS= Care sub-dimension; SS=Satisfaction sub-dimension

As seen in Table 9, mothers' scores belong to the parental attitudes scale and its sub-dimensions are  $\bar{x}$ = (65.15; 28.13; 8.13 and 28.88), respectively. Therefore, it can be indicated that mothers' parental attitudes are at an average level.

The descriptive values regarding whether mothers' parental attitudes differ according to the age variable and the results of the ANOVA for significance are figured in Table 10.

Table 10 shows that the total mean scores of the mothers' parental attitude scale had a statistically significant difference based on the age variable [ $F_{(4,387)} = 4.330, p < 0.05$ ]. Accordingly, in the comparison of the scores of mothers at the age of 40 and over from PAS with the scores of mothers in the other age group, it was found that there was a statistically significant difference in the parental attitudes of mothers at the age of 40 and over. This differentiation is in support of the mothers at the age of 25 and under and the mothers at the age of 26-30.

The descriptive values regarding whether mothers' parental attitudes differ according to the educational level variable and the results of the ANOVA for significance are visualized in Table 11.

Table 11 shows that the mean scores obtained from the parental attitudes scale don't have a statistically significant difference based on the mother's education level variable [ $F_{(4,387)} = 2.774, p > 0.05$ ]. It was determined that there was a significant difference in the attitudes of mothers towards parenting in the CP sub-dimension based on the level of education, [ $F_{(4,387)} = 6.549, p < 0.05$ ]. The results of this analysis indicate that there was a statistically significant difference between mothers whose education level was primary school and mothers whose education level was high school, associate and undergraduate in support of those whose education level was high school, associate and undergraduate. There was a significant difference in the IA sub-dimension depending on the level of education, [ $F_{(4,387)} = 2.751, p < 0.05$ ]. These results prove that there was a statistically significant difference between mothers whose education level was primary school and mothers whose education level was high school and associate in support of those whose education level was high school and associate.

**Table 10.** Descriptive Values of PAS and its Sub-Dimensions Based on Mother's Age Variable and ANOVA Results

Parental Attitude Scale	Maternal Age	n	$\bar{x}$	s	V.K.	K.T.	sd	CM	F	p	Difference
PAS	Under 25 years of age	41	64.24	6.26	g a	499.060	4	124.765	4.330	<0.05	5>1 5>2
	26-30 years old	125	64.18	5.45							
	31-35 years old	133	65.42	5.27							
	36-39 years old	56	65.39	4.84	G.i.	11151.134	387	28.814			
	40 and above	37	38.16	5.05							
CPS	Under 25 years of age	41	27.19	4.49	g a	138.814	4	34.703	3.416	<0.05	5>1 5>2
	26-30 years old	125	27.82	3.01							
	31-35 years old	133	28.22	3.09							
	36-39 years old	56	28.30	2.78	G.i.	3931.748	387	10.160			
	40 and above	37	29.67	2.93							
CS	Under 25 years of age	41	8.00	1.18	g a	7.654	4	1,914	1.856	>0.05	
	26-30 years old	125	8.07	1.00							
	31-35 years old	133	8.10	,971*							
	36-39 years old	56	8.19	,882	G.i.	398,907	387	1,031			
	40 and above	37	8.54	1.19							
SS	Under 25 years of age	41	29.04	2.59	g a	92.901	4	23.225	3.929	<0.05	5>2
	26-30 years old	125	28.28	2.43							
	31-35 years old	133	29.09	2.39							
	36-39 years old	56	28.89	2.36	G.i.	2287.701	387	5.911			
	40 and above	37	29	2.44							

PAS= Parental Attitude Scale; CPS= Competence Perception sub-dimension; CS= Care sub-dimension; SS=Satisfaction sub-dimension

**Table 11.** Descriptive Values and ANOVA Results of PAS and its Sub-Dimensions According to the Variable of Mother's Educational Status

Parental Attitude Scale	Mother's Educational Status	n	$\bar{x}$	s	V.K	K.T.	sd	CM	F	p	Difference
PAS	Primary School	64	63.87	6.17	g a	324.692	4	81.173	2.774	>0.05	
	Middle School	81	64.32	5.40							
	High School	108	65.36	4.96	G.i.	11325.502	387	29.265			
	Graduate	32	67.06	4.66							
	Bachelor's degree	107	65.78	5.55							
CPS	Primary School	64	26.54	4.35	g a	258.074	4	64.519	6,549	<0.05	3>1 4>1 5>1
	Middle School	81	27.69	2.97							
	High School	108	28.60	2.61	G.i.	3812.487	387	9.851			
	Graduate	32	28.93	2.85							
	Bachelor's degree	107	28.71	2.94							
CS	Primary School	64	8.10	1.08	g a	11.243	4	2.811	2751	<0.05	4>3
	Middle School	81	8.14	1.02							
	High School	108	7.94	.884	G.i.	395.319	387	1.021			
	Graduate	32	8.59	945							
	Bachelor's degree	107	8.20	1.08							
SS	Primary School	64	29.21	2.44	g a	34.280	4	8570	1.414	>0.05	
	Middle School	81	28.48	2.49							
	High School	108	28.81	2.45	G.i.	2346.322	387	6.063			
	Associate	32	29.53	1.96							
	Undergraduate	107	28.85	2.58							

PAS= Parental Attitude Scale; CPS= Competence Perception sub-dimension; CS= Care sub-dimension; SS=Satisfaction sub-dimension

Descriptive results regarding the preschool children's self-regulation skills-mothers' parental attitudes relationship are listed in Table 12.

**Table 12.** *Pearson Correlation Analysis Results*

Scales		PAS	CPS	CS	SS	SRSS	AS	WMS	PCES
CPS	r	.880							
	p	<0.05							
CS	r	.547	.293						
	p	<0.05	<0.05						
SS	r	.835	.518	.413					
	p	<0.05	<0.05	<0.05					
SRSS	r	.441	.476	.202	.270				
	p	<0.05	<0.05	<0.05	<0.05				
AS	r	.393	.395	.153	.289	.807			
	p	<0.05	<0.05	<0.05	<0.05	<0.05			
WMS	r	.398	.434	.139	.256	.787	.545		
	p	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		
PCES	r	.393	.430	.209	.221	.808	.476	.617	
	p	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
PCBS	r	.198	.233	.126	.081	.723	.491	.341	.419
	p	<0.05	<0.05	<0.05	>0.05	<0.05	<0.05	<0.05	<0.05

PAS= Parental Attitude Scale; CPS= Competence Perception sub-dimension; CS= Care sub-dimension; SS=Satisfaction sub-dimension SRSS = Self-Regulation Skills Scale, AS=Attention Sub-Dimension, WMS =Working Memory Sub-Dimension PCBS=Preventive control behavior sub-dimension, PCES=Preventive control emotion sub-dimension

As seen in Table 12, a moderate, positive and statistically significant relationship was found between the total score obtained from the self-regulation skills scale of preschool children and the total score obtained by mothers from the parental attitudes scale ( $r = .441$ ;  $p < 0.05$ ). When the sub-dimensions are examined, a low level, positive and statistically significant relationship was found between the attention sub-dimension of self-regulation skills scale and the perception of competence ( $r=.395$ ;  $p<0.05$ ), care ( $r=.153$ ;  $p<0.05$ ) and satisfaction sub-dimensions ( $r=.289$ ;  $p<0.05$ ) of the parental attitudes scale. A low, positive and statistically significant relationship was found between working memory sub-dimension and perception of competence ( $r=.434$ ;  $p<0.05$ ), care ( $r=.139$ ;  $p<0.05$ ) and satisfaction sub-dimensions ( $r=.256$ ;  $p<0.05$ ). Also, a low-level positive significant relationship was found between the perception of competence and preventive control-behavior ( $r=.430$ ,  $p<0.05$ ); care sub-dimension ( $r=.209$ ;  $p<0.05$ ) and between perception of competence and preventive control-emotion ( $r=.233$ ;  $p<0.05$ ), satisfaction sub-dimension ( $r=.126$ ;  $p<0.05$ ).

## CONCLUSION AND DISCUSSION

It was concluded in this study that girls had higher levels of self-regulation skills than boys and girls had higher scores in attention and behavior control. Studies with similar results are found in the literature (Astarlar, 2019; Kalin & Roebbers, 2021; Matthews et al., 2009; Smith-Donald et al., 2007; Tutkun et al., 2016). In a study, it was stated that boys were more active and impulsive than girls from an early age, and that boys exhibited more aggressive attitudes than girls when they were prevented, and therefore had lower self-regulation (Aksoy & Tozduman Yaralı, 2017). Similarly, in a study on the tasks that children in the 3-6 age group should perform, it was stated that the executive control skills of girls were higher compared to boys (Klenberg, 2015). However, the relevant literature emphasizes social rules and cultural factors in the emergence of gender-related behaviors (Ersoy, 2009). Therefore, it is considered that self-regulation skills in children may vary according to their gender with the effect of factors such as cultural factors, parents' child-rearing attitudes (Roskam et al., 2014), mother-child attachment styles (Bayındır, 2016; West et al., 2013).

Another result of the study is that the scores of the children at the age of 68-74 months differed from those at the age of 54-60 months in the working memory sub-dimension and the working memory scores of the older children is higher. Some studies in the relevant literature show that self-regulation skills of children at the age of 4-6 do not differ based on age (Akcan, 2021; Samar, 2019). On the other hand, there are also studies showing that self-regulation skills differ based on age (Arabacı, 2019; Akduman et al., 2019; Astarlar, 2019; Kovancı, 2020). In a longitudinal study, it was determined that children's self-regulation skill levels increased with age (Kochanska et al., 2001). Although it is stated that self-regulation develops together with the improvements in children as age increases chronologically, the development process can be influenced by many social-environmental factors such as children's observations about their immediate environment and the people who are role models for them (Aylar, 2012). Considering that working memory development may vary according to personal characteristics and individual differences, the capacity of working memory and the effect level of its components may vary according to individual or interpersonal characteristics (Just and Carpenter, 1992). Among the factors that reveal a behavior, in addition to biological characteristics, the characteristics of the environment of children are also important (Senemoğlu, 2012). Factors such as the social environment of children and the relationships established with the environment may affect their developmental areas. For this reason, although self-regulation skills increase with age, self-regulation development in children can be shaped according to many factors that are effective.

Self-regulation skills of children did not differ according to birth order. Some studies in the relevant literature (Tanrıbuyurdu, 2012; Şepitçi, 2018) found that the birth order did not cause any difference in self-regulation levels. The fact that children's self-regulation skills do not differ according to birth order might be explained by the fact that parents present their love and care



to their children equally to each of their children without discrimination.

It was also determined that mothers' parental attitudes varied depending on age, and mothers at the age of 40 and over received lower scores. In addition, mothers' perception of competence in parenting and their satisfaction with parenting differ depending on age. There are studies in the literature supporting the current result (Gözübüyük, 2015; Özdemir, 2019). It is stated that there are factors such as age, socio-economic characteristics, maternal depression and social support affecting mothers' parental attitudes and competence perceptions (Aksoy & Diken, 2009). Leahy-Warren et al. (2012) stated that parenting can be shaped according to many factors as well as biological characteristics, and mothers' parental attitudes may vary depending on factors such as parenting experience, social support and support of spouse. For this reason, deprivation of social support with the idea that mothers at the age of 40 and over can be self-sufficient in childcare and child rearing may cause them to adopt a more negative parental attitude. In addition, it was found that mothers with high school, associate and undergraduate education level had higher scores in the parental attitudes and competence perception sub-dimensions. In the sub-dimension of care, it was observed that among mothers with primary school education and mothers with high school or associate education, those with college education had higher scores. Similar results were found in the examination of the relevant research (Gözübüyük, 2015; Ogelman & Çiftçi Topaloğlu, 2014; Özdemir, 2019, Seçer et al., 2008). In a study examining the parental competence perceptions of parents with children in the preschool period, no relationship was found between parental competence perception and education level (Zembat et al., 2009). In the literature, there are also studies stating that parental attitudes vary according to the level of education; as the level of education increases, the parental competence perception increases (Azmoude et al., 2015; Kotil, 2010). Ogelman and Çiftçi Topaloğlu (2014) stated that being an effective parent in raising children will be possible with a high level of competence perception and that the level of higher education is important for this perception. Tezel Şahin and Cevher (2007) stated that the necessary information about child care and development of mothers can be easily accessed not only in the educational environment but also through various sources. However, it may be necessary to consider different factors that may be effective as well as the education levels of the parents. For example, Bondurant (2010) found that the mothers of boys who failed to delay pleasure were at high school and lower education levels, their socio-economic levels were low, and children had learning difficulties. One of the important findings of the present study is that especially the mothers with a primary school degree have a more negative attitude in the competence perception and care sub-dimensions.

In line with the purpose of the study, the result obtained regarding the relationship between children's self-regulation skills and mothers' parental attitudes demonstrated that there is a positive, moderate and significant relationship between these two variables. In the current study, children's self-regulation skills are at a good level. In addition, it was determined that the parental attitudes of the mothers participating in the study were positive. As a result,

mothers with positive parental attitudes have higher self-regulation skills. In the examination of the relevant literature, it is stated that mothers who have positive parental attitudes have a higher perception of self-competence, therefore they are more competent in terms of intimacy, communication or motivating their children's success in their relationships with them. In addition, it has been emphasized that the children of mothers with high parental self-competence have higher control skills and will be more successful academically (Turner & Johnson, 2003). Yoon and Sung (2014), in their study examining the effect of mothers' parental self-competence perceptions on children's emotion regulation skills, found that the children of mothers with high self-competence who developed positive parental attitudes had higher emotion regulation capacity. In a study conducted with low-income families, the relationship between maternal depression and mothers' perceptions of parental competence and children's self-regulation skills was examined and it was found that maternal depression had a decisive effect on parental attitudes. It was found that mothers with a low risk of depression after birth had a higher perception of parental self-competence and that their children had more self-regulated development (Bates et al., 2020). In another study that found similar results with the current research result, parents' competence in child care plays a supportive role on their children's self-regulation skills (Soyoğlu, 2019). Mothers' parental attitudes are considered as a determining factor in many issues such as parenting role and practices, supporting children's skills, and the quality of their relationship with their children, including their competence in child care and child rearing (Seçer & Ogelman, 2012). As a result, within the scope of this research, it was revealed that there is a relationship between children's self-regulation skills and mothers' parental attitudes.

In line with the results obtained in the study, it was revealed that girls had higher self-regulation than boys. It can be supported to reveal gender-influencing factors by planning studies that examine different variables that affect the self-regulation of boys. As a result of the research, the working memory of children differs according to age. However, it is important to reveal different results in the relevant literature and to address factors such as the social environment of children and the relationships established with the environment in the studies to be conducted on the working memory of children. Mothers' parental attitudes varied depending on age, and it was observed that mothers at the age of 40 and over and mothers with a primary school degree had more negative attitudes. In this respect, by planning research studies to determine the risk factors related to parenting, interventional programs can be planned for parents with negative attitudes to change their attitudes. Considering that mothers' parental attitudes are affected by characteristics such as social support and support of spouse, practical education programs and family participation studies can be organized, especially in the field of child care and education, including fathers. The effect of these programs on mothers' parental attitudes can be examined. This study was limited only to mothers' parental attitudes. Studies investigating fathers' parental attitudes and examining their relationship with children's self-regulation can be planned.

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