



## Examination of Preschool Children's Self-Regulation, Emotion Expressiveness and Leadership Skills

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### ABSTRACT

The aim of this study is to investigate the relationship between self-regulation, emotion expressiveness, and leadership skills of preschool children. In addition, it was investigated whether or not these skills differed according to gender and the mediating role of self-regulation skills in predicting the leadership skills by emotion expressiveness characteristics of the children. The study was designed in quantitative model and correlational survey design. The sample group of the study consisted of 323 children aged 47-67 months. The data of the study were collected using Self-Regulation Skills Scale, Emotion Expressiveness Questionnaire and Early Childhood Leadership Scale. As a result of the study, leadership, self-regulation, and emotion expressiveness skills of the preschool children were found to be correlated with each other. It is found that emotion expressiveness was an important factor in terms of leadership skills of children and self-regulation skill had a determining effect in this correlation.

**Keywords:** Preschool period, self-regulation, emotion expressiveness, leadership.

## Okul Öncesi Dönem Çocuklarının Öz Düzenleme, Duygu İfade Etme ve Liderlik Becerilerinin İncelenmesi

### Öz

Bu çalışmanın amacı, okul öncesi dönem çocuklarının öz düzenleme, duygu ifade etme ve liderlik becerileri arasındaki ilişkiyi incelemektir. Bu genel amaç doğrultusunda, bu becerilerin cinsiyete göre farklılaşp farklılaşmadığı ve çocukların duygu ifade etme becerilerinin liderlik becerilerini yordamada öz düzenlemenin aracı rolü araştırılmıştır. Araştırma nicel modelde olup ilişkisel tarama deseninde tasarlanmıştır. Araştırmanın örnekleme grubunu 47-67 aylık 323 çocuk oluşturmuştur. Araştırmanın verileri Öz Düzenleme Becerileri Ölçeği, Duygu İfade Etme Ölçeği ve Erken Çocukluk Dönemi Liderlik Ölçeği kullanılarak elde edilmiştir. Araştırma sonucunda, okul öncesi dönem çocuklarının liderlik, öz düzenleme ve duygu ifade etme becerilerinin birbirleriyle ilişkili olduğu belirlenmiştir. Çalışmada, çocukların duygularını ifade etme becerilerinin liderlik becerileri açısından önemli bir etmen olduğu ve bu ilişkide öz düzenleme becerisinin belirleyici etkisi olduğu belirlenmiştir.

**Anahtar kelimeler:** Okul öncesi dönem, öz düzenleme, duygu ifade etme, liderlik.

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## 1 | INTRODUCTION

Leadership, described as the basic component of social interaction and a necessity for the advancement of societies, is an important social behavior for children, as well (Fu, 1979; Trawick-Smith, 1988, Trawick-Smith, 2014). Leadership can be generally defined as the process of affecting and guiding behaviors of other people under certain conditions in order to achieve personal or group goals although leadership has various definitions that may vary depending on the research areas (Koçel, 2010). Leadership studies have revealed that leadership skill continues to develop throughout the life but it starts to be acquired during early childhood years and develops significantly until the twenties as many skills (Sorcher & Brant, 2012). It is stated that the experiences in childhood years are directly correlated with leadership skills in adulthood (Schneider et al., 1999). Therefore, it is emphasized that determining and supporting leadership skills of children in early childhood years will enable individuals to be successful and efficient leaders in adulthood (Duran, 2019). It is known that the positive relationships, communication established by children with others in the early period, and especially the relationship with peers affect all development areas of children including social, emotional and cognitive areas (Bodrova et al., 2013).

The leadership characteristics shown by preschool children were first introduced by Parten (1933) and later have become the subject of many studies. According to Parten, children exhibit two types of leadership as diplomat and bully. This classification of Parten provides a perspective on the positive and negative aspects of leadership. When the literature is examined, it is seen that leadership behaviors of children are associated with prosocial behaviors. Leadership characteristics seen in children are similar to those of adults. In fact, these characteristics are seen to be extremely important in defining social competence during early childhood (Shin et al., 2004). In the studies investigating the characteristics of leader children, it is remarkable that social, cognitive and language skills of children are developed and personality traits such as imagination, independence, empathy and sensitivity remain in the forefront (Fu, 1979; Hensel, 1991; Kemple, 1991). Accordingly, it has been determined that leader children are the individuals who can communicate more easily, direct others, are sensitive to others' feelings, have different ideas, are able to generate a solution when necessary, are playmakers, have high awareness levels, are consulted by their peers and they can easily adapt to new situations (Lee et al., 2005; Shin et al., 2004). Pigors (1933) emphasized four characteristics in the leadership behaviors of children: These characteristics are social awareness, long-term goals rather than short-term goals, rapid comprehension of abstract concepts and self-control.

Self-regulation skills are required for the individual to be successful in many activities. Preschool children often need to control both their behavior and cognitive processing in order to make puzzles, build towers or play dramatic games without knowing why they want to do it (Bronson, 2019). Self-regulation is related to an individual's ability to control behaviors (Senemoğlu, 2005). Self-regulation is explained by concepts such as delaying pleasure, controlling emotions, flexibility, conscious attention and maintaining attention (Eisenberg et al., 2011). Additionally, it is expressed as an individual's cognitive, behavioral and motivational control of the learning process (Adagideli & Ader, 2014; Zimmerman, 2000).

Self-regulation reflects personal control that explains how the individual cope with the problems, crisis and situations he/she encounters in his/her plans and goals that he/she tries to realize throughout life (Sternberg & Spear-Swerling, 1998). Although the researches mostly emphasize the cognitive dimension of self-regulation, self-regulation is seen as an important factor of success in social life (Polnariiev, 2006). Some studies have revealed that self-regulation in early childhood is related to various concepts and skills associated with both cognitive and social fields of development. Accordingly, it was determined that self-regulation is associated with the factors of school success and readiness (Mccelland & Tominey, 2011; Monroy, 2014), behavioral problems (Tozduman Yaralı & Güngör Aytar, 2017), game skills (Adak Özdemir & Budak, 2019; Aksoy & Tozduman Yaralı, 2017), peer relationships (Pazarbaşı & Cantez, 2019), peer rejection and academic difficulties (Eisenberg et al., 2001; Mccelland & Tominey, 2011), communication problems experienced during adolescent period (Eisenberg et al., 2004) and self-perception (Tuzcuoğlu et al., 2019) factors. For example, it was seen that children with poor self-regulation skills tend to show behavioral problems (Tozduman Yaralı & Güngör Aytar, 2017), and are less successful in peer relationships (Eisenberg et al., 2001; Eisenberg et al., 2004).

Another factor that is as effective as leadership and self-regulation skills on social developments and social interactions of preschool children is the ability to express emotions. Emotion expressiveness involves transferring the emotions that the individual experiences in different environments to another person in the most appropriate

way (Denham, 1998; Kopp, 1989). In parallel to the social emotional development of children, the ways of expressing positive and negative emotions can be shaped according to the culture, family dynamics or temperament of the child. However, the important thing is the frequency, intensity, and expressing way of negative emotions in particular. Expressing negative emotions in a way that is not suitable for the environment may both harm the adaptation of children with their environment and lead to various behavioral problems (Durmuşoğlu-Saltalı, 2010). On the other hand, it was stated that experienced but not expressed emotions are shown in different forms such as crying, tantrums, or aggression (Çağdaş & Şahin-Seçer, 2015). Therefore, emotion expressiveness plays a critical role in terms of self-regulation and leadership skills due to its function in interpersonal relationships (Southam-Gerow, 2014).

In the related literature, self-regulation is stated to be a necessity for many skills such as the ability to regulate thoughts, emotions and behaviors that the individual uses to achieve the goals he/she set (Zimmerman & Schunk, 2008). Studies on leadership (Nesbit, 2012; Pigors, 1933; Yeow & Martin, 2013) and emotion expressiveness (Ersan, 2017; Salkind, 2002) have also emphasized the importance of self-regulation. In this context, this study is seen to be important in terms of investigating the self-regulation skills of preschool children in terms of emotion expressiveness and leadership skills and determining the relationship levels between each other. Besides, in the related literature, no study was found dealing these variables together and determining the mediating roles of self-regulation in predicting leadership skills by emotion expressiveness skills. Considering all the information, it is aimed to investigate the self-regulation skills of preschool children in terms of emotion expressiveness and leadership skills. In line with this general purpose, answers for the following sub-goals were sought.

## RESEARCH QUESTIONS

1. According to the gender of the children, do their
  - a) self-regulation skills,
  - b) emotion expressiveness skills,
  - c) leadership skills differ?
2. Is there a significant correlation between self-regulation, emotion expressiveness, and leadership skills of children?
3. Do self-regulation skills have a mediating effect in predicting the emotion expressiveness characteristics and leadership skills of children?

## 2 | METHOD

### RESEARCH MODEL

The study, aiming at investigating the correlation between self-regulation skills, emotion expressiveness and leadership skills of the preschool children, was designed in quantitative model and correlational survey design. The study model aiming to determine the variation between two or more variables is called as the correlational survey model (Karasar, 2005).

### SAMPLE GROUP

The sample group of the study was composed of 323 children attending preschool education in 2019-2020 academic year. In this study, aiming at investigating the correlations between emotion expressiveness, self-regulation, and leadership skills in preschool children, power analysis was conducted by using GPower 3.1 program firstly in order to determine the necessary sample size. For the power analysis, it was determined in the similar previous studies in the literature that the correlations between self-regulation, emotion expressiveness and leadership skills in preschool period were at medium effect level (between 0.40-0.60). Therefore, the power analysis was conducted by considering the medium effect size. As a result, the necessary sample size was determined as 115 with power of 95%, confidence interval of 95%, and significance level of 0.05 ( $\alpha=0.05$ ). Accordingly, it was targeted to reach a total of 345 children from each of Kırklareli, Ankara and Istanbul cities. Criterion sampling method was used to prepare the sample group of the study. The inclusion criteria of this study for the children were determined as follows; being aged between 48-67 months, showing normal development,

attending to any preschool education institution, and agreeing to participate in the study. Accordingly, the sample group was composed of 323 children continuing to a preschool education institution located in Kırklareli, Ankara, and Istanbul.

**Table 1.** Demographic Information on The Sample Group

Demographic Characteristics	Group	n	%
Gender	Girl	163	50.5
	Boy	160	49.5
Age	48-59 months	136	42.1
	60-67 months	187	57.9
School type	Private	71	22.0
	State	252	78.0
Duration of school attendance	1 year	215	66.6
	2 years	87	26.9
	3 years	21	6.5
	None	86	26.6
Number of siblings	1	132	40.9
	2	72	22.3
	3	18	5.6
	4 and more	15	4.6
Mother's working status	Employed	158	48.9
	Unemployed	165	51.1
Mother's education status	Illiterate	8	2.5
	Literate but not a primary school graduate	41	12.7
	Primary school graduate	40	12.4
	Secondary school graduate	89	27.6
	High school graduate	145	44.9
Father's education status	Literate but not a primary school graduate	19	5.9
	Primary school graduate	32	9.9
	Secondary school graduate	96	29.7
	High school graduate	176	54.5

## DATA COLLECTION TOOLS

The data of the study were obtained by using Personal Information Form, Self-Regulation Skills Scale, Emotion Expressiveness Questionnaire, and Early Childhood Leadership Scale. Information about the scales is given below.

### Personal information form

In the Personal Information Form developed by the researcher, it was aimed to reach the information of the child's age, gender, school type, duration of school attendance, number of siblings, mother's working status and parental education status.

### Self-regulation skills scale

The scale developed by Bayındır and Ural (2016) is a 5-point Likert type scale with 33 items. According to results of the factor analysis, the scale is composed of two factors including regulation and control skills. The first factor of the scale contains 21 items and accounts for 35.23% of the variance and the second factor is composed of 12 items and accounts for 20.48% of the variance. It was found that the total explained variance was 55.71% and the item factor loads of the scale varied between .58 and .82. The Cronbach's alpha value of the scale was found as 0.96 for regulation skills factor and 0.91 for control skills factor. General reliability coefficient value was .96 and test-retest reliability value was .99. In this study, the Cronbach's Alpha coefficient of the scale was found as 0.91.

### **Child emotion expressiveness questionnaire**

It is a measurement tool developed by Scott Mirabile (2008) and adapted to Turkish by Ersan (2017) to evaluate 36-72 month-old children's levels of expressing positive (happy) and negative (sad, angry and frightened) emotions. The Child Emotion Expressiveness Questionnaire aims to evaluate the children's ability to express their happiness, sadness, anger, and fear in terms of frequency, duration, intensity and speed. The Child Emotion Expressiveness Questionnaire is a Likert type scale rated by parents or teachers consisting of a total of 16 items including four items each for the emotions of happiness, sadness, anger and fear. High score from the scale indicates higher frequency, longer time, more intensity and higher speed for each emotion. When the frequency, time, density and speed scores obtained from the scale for each emotion are summed, positive or negative emotion expressiveness skill levels of children are obtained. In this sense, while happy emotion expressiveness reveals the "positive emotion expressiveness" skill score, sad, angry and frightened emotion expressiveness scores reveal the "negative emotion expressiveness". The scale's internal consistency is at acceptable level. The Cronbach's Alpha coefficients were calculated as .57 for sad emotion expressiveness, .85 for angry emotion expressiveness, .75 for frightened emotion expressiveness, and .76 for happy emotion expressiveness. It is also stated that there is a positive and significant correlation between sad, angry, and frightened emotion expressiveness scores ( $r=.54$ ,  $p<.001$ ) (Ersan, 2017).

### **Early childhood leadership scale**

It is a measurement tool that is composed of 48 items for 48-66 month-old children and was developed by Duran (2019) to evaluate and determine the leadership characteristics of children. The scale is filled out individually for each child by the preschool teacher. It is a 5-point Likert type scale and the items are marked as "Never", "Rarely", "Sometimes", "Most of the time", and "Always". The lowest score of the scale is 48 points and the highest is 240 points. It is assumed that higher scores signify high leadership characteristics exhibited by the children and lower scores signify lower leadership characteristics. As a result of the factor analysis, the scale was determined to have a single factor structure. The internal consistency coefficient of the scale was found as .99.

### **PROCESS**

The data of the study were collected through the scales delivered to the teachers. Personal Information Form and three scales were used. It took approximately 30 minutes for the teacher to fill the scales for each child. The scales were delivered to teachers face to face or via e-mail.

### **DATA ANALYSIS**

The normal distribution assumption was first examined in order to decide the appropriate method to examine the significant difference status of self-regulation, emotion expressiveness and leadership skills of preschool children in terms of their gender. In the examination of normal distribution assumption, kurtosis, skewness coefficients and Kolmogorov-Smirnov test were considered. The scale scores were found to be normally distributed at gender levels. Since the gender variable has two levels, unrelated samples t-test was used. In the examination of the correlations between self-regulation skills, emotion expressiveness and leadership skills in preschool children, Pearson product-moment correlation coefficient was used since the scale scores provided the normal distribution assumption. In order to investigate the mediating effects of self-regulation skills in the prediction of leadership skills by emotion expressiveness skills of preschool children, structural equation modeling method was utilized. While conducting structural equation modeling analysis, the maximum likelihood parameter estimation method was used. Within the scope of mediator variable analysis, it was first examined if or not emotion expressiveness skills significantly predicted leadership skill in the model without mediator variable. The direct and indirect effects were then tested by taking the self-regulation skills, which were considered as the mediator, into the model.

### **RESEARCH ETHICS**

In order to conduct the study, the permission application was made for the Ethics Committee. After obtaining the necessary permissions, interviews were made with preschool education institutions and the sample group was formed in line with the school records. Families of the children were informed about the study by sending the informed consent form. Written consents of the families who wanted to participate in the study were obtained and

it was stated that the data obtained in the application process would not be used anywhere else and the process would proceed on a voluntary basis. In order to collect the data, appropriate times were determined with the principal and teacher of the preschool education institution and the attention was paid in collecting data by conducting the visits at the determined times.

### 3 | FINDINGS

The status of the self-regulation skills, emotion expressiveness and leadership skills of the preschool children to show a significant difference according to gender was examined with unrelated samples T-test and the results are shown in Table 2.

**Table 2.** Unrelated Samples T-Test Results for Examining Self-Regulation Skills, Emotion Expressiveness and Leadership Skills of Children According to Gender

Scale	Subscale	Group	n	$\bar{X}$	ss	sd	t	p
Self-regulation Skills Scale	Regulation skills	Girl	163	86.18	12.46	321	2.772*	0.006
		Boy	160	82.85	12.81			
	Control skills	Girl	163	44.04	8.18	321	2.156*	0.032
		Boy	160	41.32	9.48			
Emotion Expressiveness Questionnaire	Positive emotion expression	Girl	163	12.74	2.14	321	0.299	0.765
		Boy	160	12.66	2.64			
	Negative emotion expression	Girl	163	27.28	8.98	321	0.473	0.637
		Boy	160	26.84	7.60			
Leadership Scale	Leadership skills	Girl	163	180.89	31.48	321	0.156*	0.032
		Boy	160	173.09	33.55			

\*p<0.05

When Table 2 was examined, it was seen that the regulation skills and control skills of the children show statistically significant difference ( $p<0.05$ ) according to their gender. When the mean scores were examined, the mean score of the girls was seen to be higher than boys in both regulation and control skills. According to this result, it can be said that the self-regulation skills of girls were more than boys in preschool period. It was also seen that the positive emotion expressiveness and negative emotion expressiveness skills of the children did not show a statistically significant difference ( $p>0.05$ ) according to their gender. According to this result, it can be asserted that emotion expressiveness skills of the preschool children did not differ according to gender. Besides, when Table 2 was examined, it was observed that the leadership skills of children showed a statistically significant difference ( $p<0.05$ ) according to gender. When the mean scores were examined, it was determined that girls had higher mean scores in leadership skills than boys. Accordingly, it can be asserted that girls in preschool period had more leadership skills than boys.

The correlation of the self-regulation skills with leadership skills and emotion expressiveness skills of children in preschool period was calculated with Pearson's correlation coefficient. Table 3 shows the results.

**Table 3.** Results of Pearson's Correlation Coefficient Analysis Regarding the Investigation of the Correlation of Self-Regulation Skills with Leadership Skills and Emotion Expressiveness Skills of the Children

Self-Regulation skills		Positive emotion expression	Negative emotion expression	Leadership
Regulation skills	r	0.456*	-0.212*	0.675*
	p	0.000	0.000	0.000
Control skills	r	0.145*	-0.296*	0.424*
	p	0.009	0.000	0.000

\*p<0.05

When Table 3 was examined, it was seen that there was a positive statistically significant correlation between self-regulation skills and positive emotion expression skills and leadership skills of the children ( $r = 0.456; 0.675; p < 0.05$ ). Accordingly, it can be asserted that the positive emotion expressions and leadership skills of children increased as their self-regulation skills increased. A negative and low level statistically significant correlation was found between the regulation skills factor of self-regulation skills scale and negative emotion expression ( $r = -0.212; p < 0.05$ ). A positive, low level statistically significant correlation between positive emotion expression and control skills, another factor of self-regulation skills scale ( $r = 0.145; p < 0.05$ ) and a positive and moderate statistically significant correlation between control skill and leadership skill ( $r = 0.424, p < 0.05$ ) were determined. Accordingly, it can be asserted that positive emotion expression skills and leadership skills increased as the control skills increased. It was determined that there was a negative, low and statistically significant correlation between control skill and negative emotion regulation skill ( $r = -0.296; p < 0.05$ ).

In order to determine the mediating effects of self-regulation skills in the prediction of leadership skills by emotion expressiveness skills of the preschool children, structural equation modeling method was utilized. Since emotion expressiveness skills have two subscales including positive emotion expression and negative emotion expression and emotion regulation has two subscales including regulation skill and control skill, four different mediator models have been established. Figure 1 shows the path diagrams taken by the standard path coefficients of these models. Table 4 shows the path coefficients obtained when mediator variable was and was not added as well as standard error values.

**Table 4.** Examining the Mediating Role of Self-Regulation Skill in Predicting Leadership Skills by Emotion Expressiveness Skills of the Children

	Paths	Std. Coefficient ( $\beta$ )	Std. Error (S $\beta$ )	p
No mediator variable	Positive emotion expression -> Leadership	0.550	0.634	<0.05
	Negative emotion expression -> Leadership	-0.289	0.210	<0.05
Model 1	Positive emotion expression -> Regulation skill (Direct effect)	0.456	0.263	<0.05
	Regulation skill -> Leadership (Direct effect)	0.535	0.110	<0.05
	Positive emotion expression -> Leadership (Direct effect)	0.306	0.586	<0.05
	Positive emotion expression -> Regulation skill-> Leadership (Indirect effect)	0.244		
Model 2	Positive emotion expression -> Control skill (Direct effect)	0.145	0.206	<0.05
	Control skill -> Leadership (Direct effect)	0.352	0.583	<0.05
	Positive emotion expression -> Leadership (Direct effect)	0.499	0.156	<0.05
	Positive emotion expression -> Control -> Leadership (Indirect effect)	0.051		
Model 3	Negative emotion expression -> Regulation skill (Direct effect)	-0.212	0.083	<0.05
	Regulation skill -> Leadership (Direct effect)	-0.152	0.162	<0.05
	Negative emotion expression -> Leadership (Direct effect)	0.642	0.106	<0.05
	Negative emotion expression -> Regulation skill-> Leadership (Indirect effect)	-0.136		
Model 4	Negative emotion expression -> Control skill (Direct effect)	-0.296	0.057	<0.05
	Control skill -> Leadership (Direct effect)	0.371	0.190	<0.05
	Negative emotion expression -> Leadership (Direct effect)	-0.179	0.204	<0.05
	Negative emotion expression -> Control -> Leadership (Indirect effect)	-0.110		

When Table 4 was examined, it was observed that positive emotion expression positively and significantly predicted the leadership skills of the children when the mediator variable was not included in the model ( $\beta=0.550$ ;  $p<0.05$ ;  $R^2=0.30$ ). Accordingly, leadership skill increased as positive emotion expression increased. In model 1, where regulation skills were taken as a mediator variable in predicting leadership skill by positive emotion expression, it was determined that positive emotion expression positively and significantly predicted the regulation skills ( $\beta=0.456$ ;  $p<0.05$ ;  $R^2=0.21$ ) and regulation skills positively and significantly predicted the leadership skills ( $\beta=0.535$ ;  $p<0.05$ ;  $R^2=0.29$ ). In model 1, positive emotion expression positively and significantly predicted the leadership skill ( $\beta=0.306$ ;  $p<0.05$ ;  $R^2=0.09$ ). As seen in the Table, when the regulation skills were added as a mediator variable, the correlation between positive emotion expression and leadership skill decreased. The path coefficient for predicting leadership skill by indirect effect of positive emotion expression in regulation skill was found as 0.244. While positive emotion expression statistically significantly predicted regulation skill and regulation skill in turn statistically significantly predicted the leadership, status of positive emotion expression to predict leadership continued its significance; therefore, it can be asserted that regulation skills played a partial mediator role in effect of positive emotion expression in leadership skill.

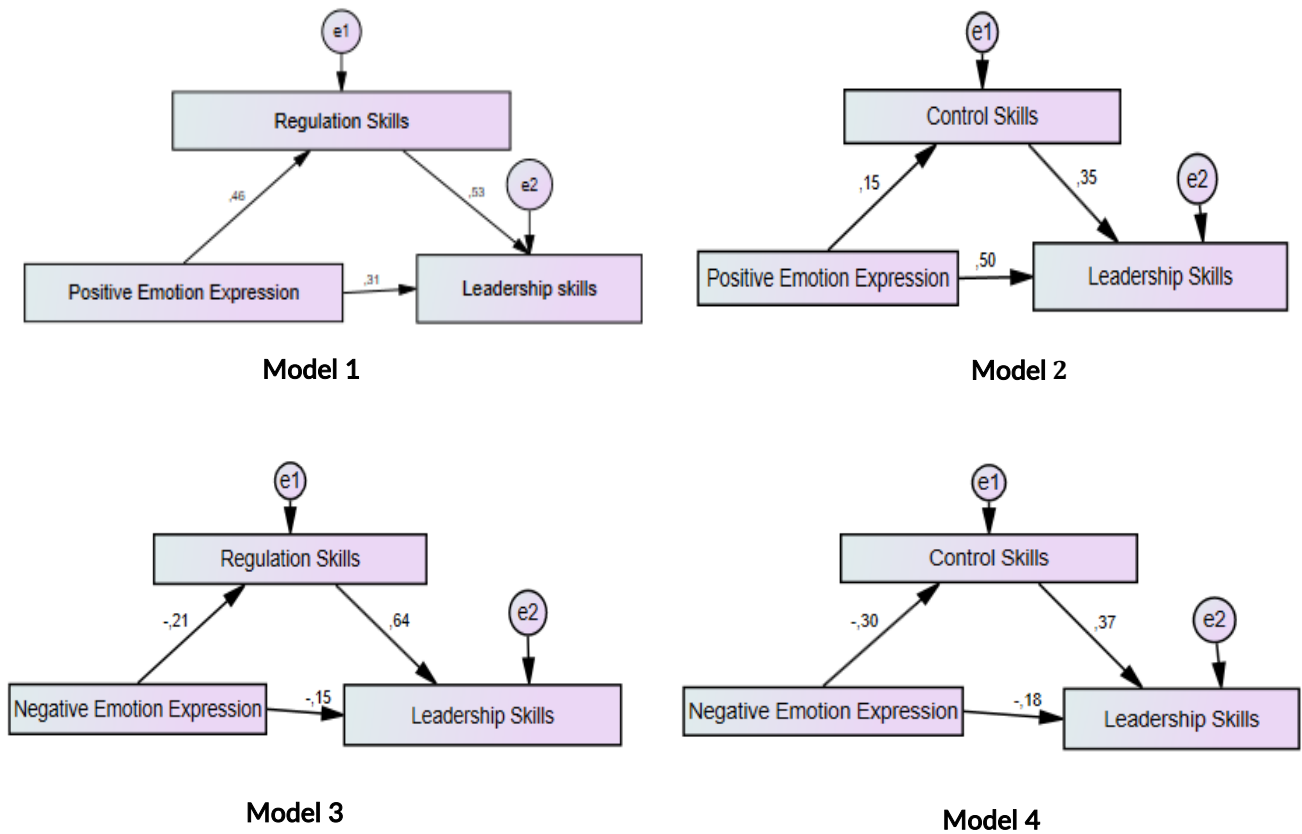
In model 2, control skills were taken as a mediator variable in the prediction of leadership skill by positive emotion expression. It was determined that positive emotion expressions positively and significantly predicted the control skills ( $\beta=0.145$ ;  $p<0.05$ ;  $R^2=0.02$ ) and control skills positively and significantly predicted the leadership skills ( $\beta=0.352$ ;  $p<0.05$ ;  $R^2=0.12$ ). In model 2, positive emotion expression positively and significantly predicted the leadership skill ( $\beta=0.499$ ;  $p<0.05$ ;  $R^2=0.25$ ). As seen in the table, when the control skills were added as a mediator variable, the correlation between positive emotion expression and leadership skill decreased. The path coefficient regarding the prediction of leadership skill by indirect effect of positive emotion expression in control skills was found as 0.051. While positive emotion expression predicted the control skills and control skills predicted leadership statistically significantly, positive emotion expression continued its significance status of predicting leadership, thus it can be interpreted that control skills played a partial mediator role in the effect of positive emotion expression in leadership skill.

When Table 4 was examined negative emotion expression was seen to be negatively and significantly predict the leadership skills of children ( $\beta=-0.289$ ;  $p<0.05$ ;  $R^2=0.08$ ), when the mediator variable was not included in the model. In other words, leadership skill decreased as negative emotion expression increased. In model 3, where regulation skills were taken as mediator variable in the prediction of leadership skill by negative emotion expression, it was determined that positive emotion expression negatively and significantly predict the regulation skills ( $\beta=-0.212$ ;  $p<0.05$ ;  $R^2=0.04$ ) and regulation skills negatively and significantly predicted the leadership skills ( $\beta=-0.152$ ;  $p<0.05$ ;  $R^2=0.41$ ). In model 3, negative emotion expression positively and significantly predicted the leadership skill ( $\beta=0.642$ ;  $p<0.05$ ;  $R^2=0.02$ ). As seen in the table, when regulation skills were added as a mediator variable, the correlation between negative emotion expression and leadership skill decreased with absolute value. The path coefficient regarding the prediction of leadership skill by indirect effects of negative emotion expression in regulation skill was found as -0.136. While negative emotion expression predicted self-regulation and self-regulation, in turn, predicted the leadership statistically significantly, status of negative emotion expression to predict leadership maintained its significance; therefore, it can be asserted that regulation skills played a partial mediator role in the effect of negative emotion expression in leadership skill.

In model 4, control skills were taken as a mediator variable in the prediction of leadership skill by negative emotion expression. It was determined that negative emotion expressions negatively and significantly predicted the control skills ( $\beta=-0.296$ ;  $p<0.05$ ;  $R^2=0.09$ ) and control skills positively and significantly predicted the leadership skills ( $\beta=0.371$ ;  $p<0.05$ ;  $R^2=0.14$ ). In model 4, negative emotion expression negatively and significantly predicted leadership skill ( $\beta=-0.179$ ;  $p<0.05$ ;  $R^2=0.03$ ). As seen in the table, when the control skills were added as a mediator variable, the correlation between negative emotion expression and leadership skill decreased with absolute value. The path coefficient regarding the prediction of leadership skill by indirect effect of negative emotion expression in control skill was found as -0.110. While negative emotion expression predicted control skills and control skills predicted the leadership statistically significantly, status of negative emotion expression to predict leadership maintained its significance. Thus, it can be asserted that control skills played a partial mediator role in the effect of negative emotion expression in leadership skill.

The path diagram taken by the standard path coefficient of four different mediator models is given as follows.





**Figure 1.** Path Diagram Showing the Mediator Role of Self-Regulation Skill in Predicting Leadership Skills by Emotion Expressiveness Skills of the Children

#### 4 | DISCUSSION & CONCLUSION

When development is considered as a whole, development fields are seen to interact with many factors. Knowing the factors affecting leadership, which is an important skill in the social development process, will enable to know children more accurately. Accordingly, the main goal of the study is to investigate the relationship between self-regulation, emotion expressiveness, and leadership skills of preschool children. In addition, it was investigated whether or not these skills differed according to gender and the mediating role of self-regulation skills in predicting the leadership skills by emotion expressiveness characteristics of the children.

Within the purpose of study, it was found that the self-regulation and leadership skills of children differed in terms of their gender, but emotion expressiveness did not differ based on gender. Accordingly, it was found that girls had a higher score in self-regulation and leadership skills compared to boys. Similar to the present study, Duran (2019) found in his study that leadership scores of girls were significantly higher than that of boys in terms of leadership skills. It is believed that gender role might have an effect on this result. It is seen that leadership behaviors of children are associated with prosocial behavior. In fact, it has been stated that these behaviors are extremely important in defining social competence in early childhood (Shin et al., 2004). The studies have also revealed that girls exhibit more prosocial behaviors than boys (Bağcı Çetin & Öztürk Samur, 2018). Therefore, it can be asserted that these behavioral characteristics explain why girls had a higher score in leadership skills than boys. When the literature about self-regulation skill is examined, it is revealed that self-regulation skills of girls are more advanced than boys (Aksoy & Tozduman Yaralı, 2017; Kochanska et al., 1997; Raffaelli et al., 2005). Therefore, the fact that the self-regulation skills are more advanced in girls than boys in the studies is in parallel with the results of the present study. In the study conducted by Ersan (2017) it was determined that aggression levels of preschool children were higher in boys compared to girls. Accordingly, a negative and significant correlation was found between aggression level and emotion expressiveness skills. Although no significant

difference was found between emotion expressiveness skills of girls and boys in the results of this study, it can be expressed that the emotion expressiveness skills of children would decrease the undesired behavior and contribute to the development of leadership skills by considering that the emotion expressiveness scores were higher in girls than boys, (Blandon et al., 2010).

One of the most important findings of the study is that there is a significant correlation between leadership, emotion expressiveness and self-regulation skills of the preschool children. On the other hand, it was found that while emotion expressiveness predicted the leadership skills of children, self-regulation played a mediator role in leadership skills. When the literature on self-regulation and leadership is examined, the determination of self-regulation on leadership is emphasized in parallel with the results of the study (Nesbit, 2012; Pigors, 1933; Yeow & Martin, 2013). Yeow and Mertin (2013) stated that interventions for self-regulation played a mediator role for leaders in achieving the duty-related qualifications. It is emphasized that other than individual dimension, self-regulation is an important factor of the social life (Polnariiev, 2006). In fact, undeveloped self-regulation skills can cause behavioral problems and in turn behavioral problems can lead to peer conflict and negative teacher-child relationships. It is known that children with poor self-regulation skills experience peer rejection and academic difficulties (Eisenberg et al., 2001; Mccelland & Tominey, 2011; Montroy et al., 2014). It is seen that children, who have insufficient preventive control skills, high reaction levels and can be hardly controlled in preschool period, experience problems in expressing themselves in social processes during adolescence period (Eisenberg et al., 2011). In this respect, the results of the studies related to self-regulation have showed that self-regulation is an important determinant in terms of leadership skills.

In this context, Southam-Gerow (2014) emphasize the functionality of emotions in interpersonal relations and states that they have a motivating role in regulating the relationship with people and objects and being preventive. Therefore, considering that the leader children are individuals who communicate more easily, direct others, are sensitive to the feelings of others, have different ideas, can find solution when necessary, are playmaker, have high awareness levels, are consulted by their peers and they adapt easily to new situation, and regulate their social interactions with their peers (Hazen & Black, 1989; Lee et al., 2005; Shin et al., 2004; Trawick-Smith, 1988), the determinative effect of emotion expressiveness on leadership draws attention. In addition, it was determined that children with leadership skills in terms of importance of emotion expressiveness could establish relationship with their peers and teachers and maintain the relationship they establish positively (Shin et al., 2004). Along with the current literature, the results of the study indicated that emotion expressiveness and self-regulation skills are important for leadership behaviors in children.

The results of the study indicated that leadership, self-regulation and emotion expressiveness skills of preschool children were associated with each other. Emotion expressiveness for children is an important factor in terms of leadership skills and self-regulation skill has a determining effect in this relationship. In this context, activities on supporting emotion expressiveness, leadership, and self-regulation skills of children in early childhood education programs can be emphasized. Although the study makes contributions to the literature both theoretically and practically, some of its limitations can be addressed in future studies. Since this study was conducted with quantitative method, only numerical values were included in the study results. In the future studies, in-depth studies can be planned using different methods like qualitative and mixed ones.

#### STATEMENTS OF PUBLICATION ETHICS

We declare that the study has no unethical problems and ethics committee approval was obtained from Kırklareli University, Kırklareli (Place: Kırklareli University, Date: 23.06.2020 Number: 69456409-199-E 9123).

#### RESEARCHERS' CONTRIBUTION RATE

The authors involved in the research contributed equally.

#### CONFLICT OF INTEREST

This study has not any conflict of interest.

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