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## Investigation of the Effect of Social Emotional Learning on Peer Relationships of Adolescents

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### Abstract

Adolescence is a critical period in which significant developments occur in social-emotional learning skills and peer relationships. Therefore, it will be important to know which variables are effective in social-emotional learning skills and peer relationships and to determine whether there is a relationship between these two skills. This study is a cross-sectional field study based on the model of the quantitative descriptive survey. The research group of the research consists of 364 students between the ages of 14 and 18, those who are located in the Provincial Center, those who are associated with Bilecik Provincial Directorate of National Education in Turkey within the 2019-2020 Academic Year and those who continue their high school education. For the research data, Social-Emotional Learning Scale developed by Totan (2018) and Peer Relationships Scale developed by Kaner (2000) and personal information form about students were used. As a result of the findings, it was found that adolescents had the highest score in the sub-dimensions of responsible decision-making and commitment and the lowest in self-disclosure and loyalty. Self-awareness and relationship skills, which are the sub-dimensions of social-emotional learning, affect the peer relationship. Besides peer relationship was found to be positively associated with social-emotional learning.

**Keywords:** Adolescence, social-emotional learning, peer relationships, commitment

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## Sosyal Duygusal Öğrenmenin Ergenlerin Akran İlişkileri Üzerindeki Etkisinin İncelenmesi

Makale Türü	Başvuru Tarihi	Kabul Tarihi
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### Öz

Ergenlik dönemi, sosyal-duygusal öğrenme becerilerinde ve akran ilişkilerinde önemli gelişmelerin yaşandığı kritik bir dönemdir. Bu nedenle bu araştırmanın amacı, sosyal duygusal öğrenme ile akran ilişkileri arasında ilişkinin bulunup bulunmadığının belirlenmesinin önemli olacağı düşünülmektedir. Bu çalışma, anket esasına dayalı kesitsel bir alan araştırmasıdır. Araştırmanın çalışma grubunu, 2019-2020 Eğitim Öğretim Yılı içerisinde Bilecik İl Milli Eğitim Müdürlüğü'ne bağlı İl Merkezinde bulunan ve lise öğrenimine devam eden 14-18 yaş aralığında olan 364 öğrenci oluşturmaktadır. Araştırma verileri için Totan (2018) tarafından geliştirilen "Sosyal Duygusal Öğrenme Ölçeği" ile Kaner (2000) tarafından geliştirilen "Akran İlişkileri Ölçeği" ve öğrenciler hakkında kişisel bilgi formu kullanılmıştır. Bulgular sonucunda, ergenlerin ölçek alt boyutlarında sorumlu karar verme ve bağlılık boyutunda en yüksek puana sahipken kendini açma ve sadakat boyutunda en düşük puana sahip olduğu bulunmuştur. Sosyal duygusal öğrenmenin alt boyutlarından öz farkındalık ve ilişki kurma akran ilişkisini etkilemektedir. Ayrıca, akran ilişkisinin sosyal duygusal öğrenme ile pozitif yönde ilişkili olduğu bulunmuştur. Sosyal duygusal öğrenmenin, akran ilişkisi alt boyutlarında bağlılık boyutu ile pozitif yönlü orta kuvvette istatistiksel olarak anlamlı bir ilişki bulunmaktadır.

**Anahtar Sözcükler:** Ergenlik, sosyal-duygusal öğrenme, akran ilişkileri, bağlılık

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## **Introduction**

As children are in puberty, the time spending with their peers increases (Brown & Klute, 2003). Adolescence is a period in which social relations outside the family gain importance and the communication of individuals with their peers is at the forefront. Individuals have a desire to act independently from their parents at this period, and their social circle increases gradually and they try to socialize with their peers (Çiftçi, 2018). Peer groups can become the most important determinant of the individual's socialization and adolescent behavior (Rohrbeck, 2003). Adolescents' social-emotional behavior, which is negative, aggressive, or destructive, can cause their friends to move away from themselves (Woodhouse, Dykas & Cassidy, 2012). The social relationships that adolescents establish with their peers provide an opportunity to learn many social-emotional skills (Brown & Klute, 2003). Besides while organizing family and friend relationships, these skills help adolescents to take part development, social activities, to make excellent choices, and to get along well with teachers and all other individuals (Semrud-Clikeman 2007; Kathryn, 1991). According to Horroks (1965), the adolescent peer relationships (PR) teach self-knowledge and coping with others, and also offer the opportunity to prove herself and start social relationships, so PR increase the social learning experiences of adolescent. Coie (1990) states that adolescent PR are important in developing social skills, self-efficacy, ability to cope with stress, and a sense of sincere emotional support. In the study conducted by Pepler and Bierman (2018), they emphasized that it was important the fact that every child has healthy relationships at home, at school, in the peer group, and takes part in positive PR to attain social-emotional development. During adolescence, which is a severe and stressful period that an emotional confusion is experienced, conflict with parents, moodiness and thoughtless behaviors and are at risk for anti-social behaviors (Hall, 1904). SEL skills and friends in learning processes of adolescents and social communication in their relationship are very important. SEL is an approach that aims to protect children and adolescents from negative consequences by supporting them in mastering their behavioral and cognitive competencies (Taylor et al., 2017). After the 1980s, SEL gained importance quickly. Because the experienced problems by children and adolescents increase and the developments in psychology, social-emotional education was gained more importance after the 1990s (McKenzie, 2004). Goleman's book titled 'Emotional Intelligence' forms the basis of SEL activities. Stating that there are different fields of intelligence and different ways of learning, Goleman has brought a different perspective to the learning field. The concept of the affective domain, which is also one of the educational objectives mentioned by Bloom, Krathwohl and Masia (1964) includes skills such as considering others' thoughts, being open to discussions, and feeling self-confident while working independently. In the 1990s, the Fetzer Institute first addressed the term Social and Emotional Learning (SEL) to define interventions that would enable the development of personal skills to reduce risk factors and develop protective factors for positive development of youth. It has also defined SEL as recognizing and managing emotions, setting and achieving positive goals, appreciating others' perspectives, establishing and maintaining positive relationships, making responsible decisions, and gaining core competencies to deal with interpersonal situations, constructively (Elias et al. 1997).

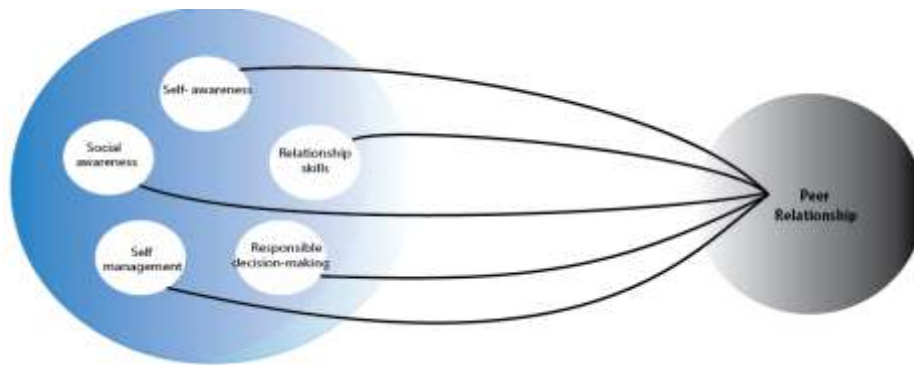
As understood from these definitions, SEL includes self-awareness, self-management, social awareness, relationship skills, and responsible decision-making skills (CASEL, 2020). SEL skills enable the person to take pleasure in the relationships it has established by correctly managing emotional processes in social life and this improves the life quality of the person (Merter, 2013). The World Health Organization (WHO, 1996) states that SEL programs to be implemented for adolescents can affect mental health positively and reduce risk factors, emotional, and behavioral problems. Thus, SEL skills contribute to children by strengthening their bonds with their peers and adults and increasing their learning motivation (Lopes & Salovey, 2004). Adolescents' friend relationships can mutually affect SEL skills. When adolescents hook up to peers who exhibit social competence, their social skills can attain the desired level (Bee & Boyd, 2009). In particular, it is important for adolescents to understand the clash may experience with their peers and to learn a range of interpersonal problem-solving strategies that they can use when interacting with their peers (Nanda, 2005). Buhrmester (1996) stated that the development of sincere and mutual friendship in adolescents is related to social-emotional adjustment and relational competence. Besides, social competency interventions for adolescents acquired the social, emotional, cognitive, and behavioral skills that adolescents need to successfully interact with other adolescents (Lynch, Lerner & Leventhal, 2013). Adolescents who have difficulties in PR generally need systematic and properly SEL guidance (Pepler

& Bierman, 2018). When the studies conducted in Turkey are examined, it is seen that the SEL skills of adolescents are related to perceived parental attitudes (Öztürk, 2017), lifelong learning (Akcaalan, 2016), loneliness (Körler, 2011), bullying (Totan & Kabakçı, 2010), emotional intelligence levels (İşeri, 2016), problem-solving skills and social adaptation skills (Melikoğlu, 2020), social relationship elements, and hope levels (Candan & Yalçın, 2018). Despite great interest in supporting SEL in adolescents, no studies have been found examining the relationship between SEL and PR. Adolescence involves important interactions with peers. SEL skills contribute to both the quality of this interaction and the consequences of these interactions. It can be said that a detailed examination of the development of social skills with SEL is necessary during adolescence when peer interaction comes to the fore (Bradford-Brown & Larson, 2009). Considering all these, adolescence is a critical period in which significant developments occur in SEL skills and PR. In this period, it is thought that determining whether there is an affair between the SEL and PR levels of adolescents and these two skills will be useful for individuals working with adolescents.

## Method

### Research Design

This research is a cross-sectional field study based on the model of the quantitative descriptive survey. The survey model is a research model used to reveal an existing situation, summarize the evaluation of the study populations, and develop relevant theories by evaluating the underlying causes of these characteristics (Chambers & Clark, 2012).



**Figure 1.** *Model of the Research*

### Research Sample Group

The research group of the research consists of 364 students between the ages of 14 and 18, those who are located in the Provincial Center, those who are associated with Bilecik Provincial Directorate of National Education in Turkey within the 2019-2020 Academic Year and those who continue their high school education. The convenience sampling method was used to select schools for sampling. In this method, individuals who are easy to reach, suitable for research and volunteering are selected (Gravetter & Forzano, 2012).

A total of 364 adolescents, 216 of whom were boys (59.3%) and 148 were girls (40.7%), participated in the research. Considering their age, 43 (11.8%) of adolescents were fourteen, 83 (22.8%) were fifteen, 109 (29.9%) were sixteen, 105 (28.8%) were ten seven and 24 (6.6%) are eighteen years old. Considering the education levels, 67 (18.4%) of the adolescents are in the 9th grade, 102 (28%) are in the 10th grade, 95 (26.1%) are in the 11th grade, 100 (27.5%) are in the 12th grade.

### Research Instruments and Procedures

For the research data, the 'Social Emotional Learning Scale' developed by Totan (2018) and the 'Peer Relationships Scale (PRS)' developed by Kaner (2000) and personal information form in students were used. Confirmatory factor analysis results regarding the data collection tools used are illustrated in Table 1.

**Table 1***Estimates of Goodness-of-fit Index for Model*

The Criterion of Model Fit	Good Fit	Acceptable Fit	SEL	PR
			Fit / Accept	Fit / Accept
CMIN/SD	$\chi^2 / sd \leq 3$	$\chi^2 / sd \leq 5$	2.41	2.04
Chi-square Fit Test ( $\chi^2$ ) (p= 0.0)	$0.05 < p \leq 1$	$0.01 < p \leq 0.05$	0.000	0.000
RMSEA	$RMSEA \leq 0.05$	$RMSEA \leq 0.08$	0.062	0.05
NFI	$0.95 \leq NFI$	$0.90 \leq NFI$	0.90	0.92
NNFI	$0.95 \leq NNFI$	$0.90 \leq NNFI$	0.93	0.95
CFI	$0.97 \leq CFI$	$0.95 \leq CFI$	0.94	0.96
IFI	$0.95 \leq IFI$	$0.90 \leq IFI$	0.94	0.96
RMR	$0 < RMR \leq 0.05$	$0 < RMR \leq 0.08$	0.06	0.05
SRMR	$0 < SRMR \leq 0.05$	$0 < SRMR \leq 0.08$	0.058	0.05
GFI	$0.90 \leq GFI$	$0.85 \leq GFI$	0.89	0.92
AGFI	$0.90 \leq AGFI$	$0.85 \leq AGFI$	0.86	0.90

CFA was performed for the PRS, which was evaluated by EFA and obtained in four dimensions, and it was tested whether the model was compatible. The values generally considered in the model fit are  $\chi^2 / DF$ , GFI, CFI, and RMSEA. The value of  $\chi^2/DF$  is a good fit to be below 3, the GFI value is 0.92, it is a good fit, the CFI value is acceptable to be 0.96, and RMSEA value is a good fit to be 0.05. Within the framework of the obtained fit indices, it was revealed that the model has a good fit (Karagöz, 2016).

CFA was performed for the social-emotional scale, which was evaluated by EFA and obtained in five dimensions, and it was tested whether the model was compatible. The values generally considered in the model fit are  $\chi^2 / DF$ , GFI, CFI, and RMSEA. The value of  $\chi^2/DF$  is a good fit to be below 3, the GFI value is 0.89, it is acceptable, the CFI value is close to acceptable compliance to be 0.94, and RMSEA value is acceptable to be 0.062. Within the framework of the obtained fit indices, it was revealed that the model has an acceptable fit (Karagöz, 2016).

### Social-Emotional Learning Scale

This scale was developed by Totan (2018) to determine the SEL of adolescents and consists of 23 items and 5 sub-dimensions. Sub-dimensions of the scale; self-awareness, social awareness, self-management, relationship skills, and responsible decision making. This scale is Likert type. High scores obtained from the scale indicate the high level of SEL of the participants. Cronbach's alpha internal consistency coefficient of the scale is .92, while McDonald's omega is the .94. Among the applications of the scale with two-week intervals, the .82 level is statistically significant for the total of the scale. In our research, the reliability analysis results (Cronbach's alpha) of the SEL scale are illustrated in Table 2.

### Peer Relationships Scale

The scale developed by Kaner (2000) consists of 18 items and 4 sub-dimensions, and that created with data collected from adolescents who studied at high school to examine their relationships with their peers. Sub-dimensions of the scale are commitment, confidence and identification, self-disclosure, and loyalty. This scale is Likert type. High score obtained from the scale indicates positive relationships with with peers, while a low score indicates negative relationships. The Cronbach Alpha of the scale is .86 and the Spearman-Brown test value is .73. Besides, the reliability coefficient of the test-retest reliability study is .93. In our research, the reliability analysis results of the PRS (Cronbach's alpha) are illustrated in Table 2.

### Data Analysis

The data obtained were analyzed with the help of the statistical package program Jamovi 1.1.9. In the data analysis, it was first examined whether normality, homogeneity, they are independent of

each other. For the normality of the range, Skewness and Kurtosis values, mean and median proximity levels were determined to illustrate the normal range, and parametric tests were used in the analysis of the data. In descriptive statistics, frequency, percentage, arithmetic mean, standard deviation, minimum and maximum values were used. The values obtained are illustrated in Table 2. Relationships between SEL Scale and PRS scores were evaluated using the correlation coefficient test (Watkins, 2016). Simple and Multiple Regression Analysis was carried out to determine whether the social-emotional development of adolescents predicted PR (Shafer and Zhang, 2012). On the other hand, to evaluate fit between the scale and the sub-dimensions according to EFA results confirmatory factor analysis was performed with Lisrel 8.80.

## Results

**Table 2**

*Findings related to the Basic Level Analysis Results for the Dimensions of the Research*

Scales and Sub-dimensions	Cronbach's alpha ( $\alpha$ )	Shapiro-Wilk	Skewness/SE	Kurtosis/SE	Descriptive Variables		
					$\bar{x} \pm SS$	Sum	Min/Max
<b>SEL</b>	$\alpha = .848$	0.149	-.04	-1.32	88 $\pm$ 11.2	31904	60 / 115
Self- awareness		< .001	-2.17	-0.79	24 $\pm$ 3.34	8562	14 / 30
Social awareness		< .001	-1.83	-1.45	15 $\pm$ 2.48	5540	8/20
Self-management		< .001	-1.53	-1.19	15 $\pm$ 2.80	5333	7/20
Relationship skills		< .001	0.15	-1.02	19 $\pm$ 2.97	6755	11/25
Responsible decision-making		< .001	-2.67	-1	16 $\pm$ 2.64	5714	8/20
<b>PR</b>	$\alpha = .874$	0.11	-0.91	-1.42	63 $\pm$ 11.7	23039	31 / 90
Commitment		< .001	-3.67	-1.11	31 $\pm$ 5.78	11441	13 / 40
Confidence and identification		< .001	-4.17	0.77	14 $\pm$ 3.32	5183	4/20
Self-disclosure		< .001	0.03	-3.13	8.8 $\pm$ 3.20	3207	3/15
Loyalty		< .001	1.15	-2.82	8.8 $\pm$ 3.22	3208	3/15

\*=  $p < .001$ ; SE= Standard error

Cronbach's alpha coefficient of the SEL scale was 0.92 in the original research; the coefficient of the PR was found to be 0.86. In the reliability analysis, no expression in the original research was removed. According to Cronbach's alpha ( $\alpha$ ) values, the SEL scale (0.848) and PRS reliability coefficient (0.874) were found to be highly reliable (Santos, 1999). According to the normality test results studied for the scales and its sub-dimensions, since the p-value is greater than 0.05 for the overall scales; Skewness Kurtosis (divided by standard error) values were examined and the range of the mean-median values was found to be a normal range by looking at the level of closeness to each other (Karagöz, 2016).

When the findings obtained, it is seen that the PR ( $\bar{x} = 63$ ;  $SS = 11.7$ ) and SEL ( $\bar{x} = 88$ ;  $SS = 11.2$ ) levels are moderate. Besides, the highest score that can be obtained in the sub-dimensions is 40, and the lowest score is 3. The lowest score that can be taken in the scale is 31, and the highest score is 115. In the arithmetic mean, which is one of the descriptive variables, calculations were made according to the total scores. In terms of the highest score obtained in the analysis made according to the total scores in the scale dimensions, in the dimension of responsible decision making ( $\bar{x} = 15.7$ ;  $SD = 2.64$ ; 78.5%) and the commitment dimension ( $\bar{x} = 31.4$ ;  $SD = 5.78$ ; 78.5%) were got. The dimensions with the lowest average are the self-disclosure ( $\bar{x} = 8.81$ ;  $SD = 3.20$ ; 58.7%) and the loyalty ( $\bar{x} = 8.81$ ;  $SD = 3.22$ ; 58.7%).

**Table 3***Findings regarding Correlation and Regression Analysis regarding the Dimensions of the Research*

Scales and Sub-dimensions	1	1.1	1.2	1.3	1.4	1.5	2	2.1	2.2	2.3	2.4
<b>1. SEL</b>											
	1	R <sup>2</sup> =.65*									
		t=25.75	R <sup>2</sup> =.55*	R <sup>2</sup> =.60*	R <sup>2</sup> =.59*	R <sup>2</sup> =.71*	R <sup>2</sup> =.10*	R <sup>2</sup> =.16*	R <sup>2</sup> =.10*	R <sup>2</sup> =.03*	R <sup>2</sup> =.004*
			t=20.8	t=23.1	t=22.9	t=30	t=6.28	t=8.31	t=6.39	t=3.13	t=-1.25
1.1.Self-awareness	r=.80		R <sup>2</sup> =.32*	R <sup>2</sup> =.23*	R <sup>2</sup> =.22*	R <sup>2</sup> =.34*	R <sup>2</sup> =.10*	R <sup>2</sup> =.12*	R <sup>2</sup> =.09*	R <sup>2</sup> =.04*	R <sup>2</sup> =.005
	p<.001		t=13	t=10.4	t=10	t=13.6	t=6.26	t=7.09	t=6.15	t=3.70	t=-.109
1.2.Social awareness	r=.74	r=.57		R <sup>2</sup> =.18*	R <sup>2</sup> =.21*	R <sup>2</sup> =.27*	R <sup>2</sup> =.04*	R <sup>2</sup> =.07*	R <sup>2</sup> =.04*	R <sup>2</sup> =.005	R <sup>2</sup> =.004
	p<.001	p<.001		t=8.84	t=9.74	t=11.4	t=3.71	t=5.31	t=4.02	t=1.32	t=-1.26
1.3.Self-management	r=.77	r=.48	r=.057		R <sup>2</sup> =.24*	R <sup>2</sup> =.43*		R <sup>2</sup> =.03*	R <sup>2</sup> =.07*	R <sup>2</sup> =.04*	R <sup>2</sup> =.002
	p<.001	p<.001	p<.001		t=10.82	t=16.38		t=3.23	t=5.09	t=3.78	t=3.70
1.4.Relationship skills	r=.77	r=.47	r=.046	r=.0494		R <sup>2</sup> =.36*	R <sup>2</sup> =.10*	R <sup>2</sup> =.13*	R <sup>2</sup> =.11*	R <sup>2</sup> =.04*	R <sup>2</sup> =.001
	p<.001	p<.001	p<.001	p<.001		t=14.1	t=6.32	t=7.26	t=6.55	t=4.11	t=-.685
1.5.Responsible decision-making	r=.85	r=.58	r=.052	r=.0652	r=.0596		R <sup>2</sup> =.05*	R <sup>2</sup> =.11*	R <sup>2</sup> =.04*	R <sup>2</sup> =.001	R <sup>2</sup> =.01
	p<.001	p<.001	p<.001	p<.001	p<.001		t=4.32	t=6.6	t=3.76	t=1.89	t=-1.49
<b>2. PR</b>											
	r=.31	r=.031	r=.019	r=.0167	r=.0315	r=.0222		R <sup>2</sup> =.70*	R <sup>2</sup> =.66*	R <sup>2</sup> =.57*	R <sup>2</sup> =.30*
	p<.001	p<.001	p<.001	p<.001	p<.001	p<.001		t=29.3	t=26.6	t=22.1	t=12.5
2.1.Commitment	r=.40	r=.35	r=.27	r=.259	r=.357	r=.328	r=.839		R <sup>2</sup> =.38*	R <sup>2</sup> =.21*	R <sup>2</sup> =.03*
	p<.001	p<.001	p<.001	p<.001	p<.001	p<.001	p<.001		t=14.8	t=9.88	t=3.32
2.2.Confidence and Identification	r=.32	r=.31	r=.21	r=.195	r=.325	r=.194	r=.814	r=.614		R <sup>2</sup> =.29*	R <sup>2</sup> =.09*
	p<.001	p<.001	p<.001	p<.001	p<.001	p<.001	p<.001	p<.001		t=12.2	t=59.4
2.3.Self-disclosure	r=.16	r=.19	r=.07	r=.043	r=.211	r=.099	r=.757	r=.461	r=.539		R <sup>2</sup> =.15*
	p=.002	p<.001	p=.189	p=.410	p<.001	p=.06	p<.001	p<.001	p<.001		t=7.90
2.4.Loyalty	r=.07	r=.01	r=.07	r=.098	r=.036	r=.078	r=.548	r=.172	r=.298	r=.383	
	p=.214	p=.913	p=.208	p=.063	p=.494	p=.136	p<.001	p<.001	p<.001	p<.001	

\*= $p < .001$ ; r= correlation coefficient

In the correlation analysis in terms of scales and sub-dimensions;

The correlation level of self-awareness ( $r = .80$ ) and responsible decision making ( $r = .85$ ) dimensions in the SEL scale is higher than in other dimensions. In the PRS, the correlation level of commitment dimension ( $r = .839$ ) and confidence and identification ( $r = .814$ ) dimensions are higher than other dimensions. There is a statistically significant relationship between SEL and PR with a low-strength positive ( $r = .31$ ). In the sub-dimensions of the PRS, there is a statistically significant relationship with the loyalty dimension and a positive moderate strength ( $r = .40$ ). There is a low and very low positive relationship with other dimensions.



**Table 4***Findings on the Comparison of Peer Relationships and Social Emotional Learning*

Dependent Variable	Independent Variables	Estimate (B)	Estimate (SE)	t	VIF	p	Shapiro-Wilk	Durbin Watson	R <sup>2</sup>	Adj. R <sup>2</sup>	F	p
PR	Constant	31.122	4.667	6.70		<.001						
	Self-awareness	.884	.232	3.81	1.81	<.001						
	Social awareness	-.151	.297	-.51	1.64	.613						
	Self-management	-.192	.279	-.69	1.83	.492						
	Relationship skills	.998	.251	3.97	1.68	<.001						
	Responsible decision-making	-.129	.338	-.38	2.40	.702						

Autocorrelation=.364  
Statistic=.994  
DW=1.25  
p=.188  
p < .001

Multiple regression analysis results to determine the effect of SEL on PR are given in the table. The regression model established according to the results of the analysis was found significant ( $F=11,5$ ;  $p<0,001$ ). Accordingly, while self-awareness and relationship skills, which are the sub-dimensions of SEL, affect the PR ( $\beta_1 = .884$ ;  $\beta_2 = .998$ ;  $p < 0.001$ ), other dimensions do not. According to the regression model, self-awareness and relationship skills explain 12.6% of the PR.

### Discussion, Conclusion and Recommendations

This study aims to examine the PR relationship and SEL levels of adolescents and the relationship between these two variables. When the findings were examined, it was found the PR and SEL levels of adolescents were moderate. In the study conducted by Candan & Yalçın (2018), it was seen that there was a moderately positive relationship between SEL skills and peer support. It can be stated that for this situation are effective the reasons such as intense emotions during their adolescence, emotions ups and downs, (Pedük, 2011), which adolescents in high-school are in an intensive study pace for the university exam, and that given more importance to academic success in high school period because of making crucial decisions about their future professionally in this period (Ergene & Yıldırım, 2004). Besides, it can be thought the negative social behaviors that may occur during adolescence will decrease with age (Erdoğan, 2002). Social skills such as making friends, the ability to look from the perspective of others, communication skills, self-control, understanding others' intentions, desires and beliefs require SEL (Rubin et al. 1998). For this reason, it can be said the level of SEL causes PR to be at a medium level. It is seen that adolescents have moderate PR and SEL levels. Also, adolescents have the highest score in the scale sub-dimensions, responsible decision making and commitment, and the lowest in self-disclosure and loyalty. Decisions taken during adolescence have a lifetime effect on the individual's health, psychological well-being, and society's acceptance (Ersever, 1996). As a result of the study conducted by Çoban and Hamamcı (2006), it was found that high-school students mostly use logical decision-making strategies. Adolescents want to be included in a group as developmental period features and to be accepted by that group. This makes friends and friend loyalty important during adolescence (Başdaş, 2018; Bee & Boyd, 2009). As a result of the study conducted by Sarı (2012) to examine adolescents 'friend loyalty, adolescents' level of loyalty to their friends was found high. In adolescence, the person acts with his/her friends and turns to positive interactions such as problem-solving, decision making, and establishing intimacy (Hay et al. 2008). Adolescents turn to friends rather than their families for emotional support during stress (Furman & Buhrmester, 1992). Adolescence is a process that is sensitive to negative social assessments and has peer loss concerns (Westenberg et al., 2007). For this reason, even adolescents may find it difficult to open themselves, even their close friends. While they convey their personal feelings and thoughts of their peers, they may feel a sense of shame and rejection by their peers (Omarzu, 2000). In order to examine PR with high school students, Çiftçi (2018) observed that they scored lower in self-disclosure and loyalty sub-dimensions. This result is consistent with our research results. Friendships are not as special as romantic relationships. Unlike romantic or marital

relationships, individuals can have multiple friendships at the same time. Therefore, loyalty to friendships may not be as important as in romantic relationships in this period (Le & Agnew, 2003). During adolescence, a person can maintain multiple wonderful friendships at the same time, but can choose a better alternative in romantic relationships (Feiring, 1999). In light of this information, it can be said that the quality of adolescent SEL skills plays an important and facilitating role in engaging with peers.

The findings support the idea that PR is positively associated with SEL. It is thought that being SEL, understanding their feelings and thoughts, and controlling their emotions, having effective skills with others, and maintaining these relationships healthily to develop PR. The results of our research are consistent with many studies conducted that social-emotional skills affect PR positively (Kramer et al., 2010; Schofield & Kafer, 1985; Lawrence, 1982; Taylor, Oberle, Durlak & Weissberg, 2017). Also, as a result of studies conducted on SEL intervention programs, these programs were found to reduce bullying and physical aggression by peers (Espejo-Siles, Zych & Llorent, 2020; Raimundo, Marques – Pinto & Lima, 2012; Totan & Kabakçı, 2010). Some social behaviors, such as helping peers when necessary and collaborating with others, contribute positively to PR (Layous et al., 2012). Besides, children with positive social behaviors are more likely to be accepted by their peers (Fredricks, Blumenfeld & Paris, 2004). In the study conducted by Greca (1983), it was found that the PR of adolescents developed as a result of the social skills training program developed to teach interpersonal skills to adolescents having problems with their peers. It was observed that students with low social skills had difficulties in communicating with their peers (Öztürk, 2008). For this reason, adolescents with poor social skills may face negative social situations such as peer rejection, isolation, limited social activity, and weak social support. In these individuals may cause to top levels of loneliness and poor quality friendship (Braddock et al., 2015). Studies prove that children with friends are more socially competent than children who are alone, children with friends are more social, self-confident, and less likely to be alone (Newcomb & Bagwell, 1995). Adolescents with a high level of SEL can be said to be more responsible and harmonious with their peers and have high relationships-building skills.

According to the findings, self-awareness, and relationship building, which are the sub-dimensions of SEL, affect the PR. Self-knowledge, awareness of talents and abilities are effective in establishing healthy relationships with others. Being aware of the positive characteristics, abilities and beneficial aspects of adolescents helps them establish positive relationships with their peers. In the research conducted for high school students, it was found that the education given for self-knowledge has a significant effect on the increase of PR scores (Poorgholami et al., 2015). Social skills require frequent interpersonal communication and interactions. In peer interactions, the person must correctly perceive the needs of the other person, regulate their behavior and emotions, know which behavior is effective and socially acceptable, can resolve conflicts, and make appropriate decisions (Caprara et al., 2000; Melikoğlu & Bedel, 2021). Adolescents' attitudes towards their peers and peer acceptance are indicators of social skills. Skills such as establishing good relationships, respecting the rights and feelings of others, and considering group norms for appropriate social behavior are important for PR (Çetin et al., 2003; Furtana, 2018).

In the PR between sub-dimensions of SEL, there is a statistically significant relationship with the loyalty dimension and a moderately positive force. PR are more important during adolescence. Adolescents who securely connect to their peers will also be able to feel socially and emotionally. Adolescents who have safe relationships with their peers do less negative and aggressive behavior than adolescents who have insecure relationships with their peers (Laible, 2007; Şafak-Soyaslan, 2019). Research proves that peer commitment affects the social-emotional characteristics of adolescents such as self-esteem, self-efficacy, self-control, and emotional competence (Liu et al., 2016; Wilkinson, 2004). Adolescents with a high level of SEL are more likely to build trust-based relationships with their peers. The bond between peers helps create and maintain interrelationships.

Like many studies, this study has some limitations. The fact that survey data was not collected from all regions of Turkey represents the limit of generalization of results. This study helps to understand the link between SEL and peer connections. However, because of the data's correlational

nature, causal interpretations of these associations are not possible. Longitudinal investigations are needed to prove that these variations are linked.

Conclusively, it is considered important to have a variety of social skills as well as having the necessary cognitive abilities and abilities to become healthy individuals in our daily life. Therefore, to develop PR that is of great importance during adolescence, SEL should be provided to adolescents. For this reason, SEL programs for adolescents can be prepared in schools. These programs can include activities that will improve self-awareness and relationship skills. Besides, adolescents should be encouraged to participate in social activities in educational settings, and opportunities to interact and establish relationships with their peers should be provided. By giving training to teachers and parents for SEL, it can be ensured that they support adolescents in terms of SEL. It can also be applied by developing both preventive and improved school psychological counseling and guidance programs for adolescent SEL. To promote PR and social-emotional development, adolescents' participation can be secured by organizing out-of-school social events. Adolescent social-emotional learning can be studied experimentally and longitudinally.

### References

- Akcaalan, M. (2015). *Examining the relationships between lifelong learning and social emotional learning in terms of various variables*. (Unpublished Master's Thesis). Sakarya University, Institute of Educational Sciences.
- Başdaş, E. (2018). *Examination of the relationship among adolescents' problematic internet use, social problems and internalizing/externalizing problems*. Doctoral Thesis. Anadolu University Institute of Educational Sciences, Eskişehir.
- Bee, H. & Boyd, D. (2009). *Developmental psychology* (Translated by, Okan Gündüz). Ankara: Kaknüs Publications.
- Bloom, B. S., Krathwohl, D. R. & Masia, B. B. (1964) *Taxonomy of educational objectives. The classification of educational goals*. Handbook 2: Affective Domain Boston David McKay Company, Inc.
- Buhrmester D (1996). *Need fulfillment, interpersonal competence, and the developmental contexts of early adolescent friendship*. In WM Bukowsky, A Newcomb, & W Hartup (Eds.), *The Company they Keep: Friendship and Childhood and Adolescence*. Cambridge, UK: Cambridge University Press.
- Brown, B. B., & Klute, C. (2003). *Friendships, cliques, and crowds*. In G. R. Adams, & M. D. Berzonsky (Eds.), *Blackwell handbook of adolescence*. Malden, MA: Blackwell Publishing.
- Braddock, B. A., Twyman, K. A., Garrity, M. R., Wang, T., Neary, M. K., Ezzelgot, J. & Heithaus, J. L. (2015). A few close friends the pediatrician's role in the management of social skills deficits in adolescent children. *Clinical Pediatrics*, 54(12), 1-8.
- Bradford-Brown, B. & Larson, J. (2009). *Peer relationships in adolescence*. Handbook of Adolescent Psychology. John Wiley & Sons, Inc. All.
- Candan, K., & Yalçın, A. F. (2018). Investigation of the relationship between social emotional learning skills of adolescents and social relationship elements and hope level. *International Journal of Society Studies*, 9(16), 319-348.
- Caprara, G.V., Barbanelli, C., Pastorelli, C., Bandura, A. & Zimbardo, P. G. (2000). Pro-social foundations of children's academic achievement. *Psychological Science*, 11(4), 302-306.
- Chambers, R. L., & Clark, R. G. (2012). *An introduction to model-based survey sampling with applications*. OUP Oxford.
- Coie, J. D. (1990). *Towards a theory of peer rejection*. In S. R. Asher & J. D. Coie (Eds.), *Peer rejection in childhood*. New York: Cambridge University Press.
- Collaborative for Academic, Social, and Emotional Learning CASEL [Internet]. (2020). Available from: <https://casel.org> [Accessed: Dec 10, 2020].
- Çetin, F., Alpa-Bilbay, A. & Albayrak- Kaymak, D. (2003). *Social skills in children*. Epsilon Publishing.
- Çiftçi, H. (2018). Comparison of peer relationship levels: a review on high school students. *Journal of Human and Social Sciences Researches*, 7(3), 1516-1535.
- Çoban, A. & Hamamcı, Z. (2006). Control foci of different adolescents in terms of decision strategies. *Kastamonu Education Journal*, 14(2), 393-402.

- Elias, M. J., Zins, J. E., Weissberg, R. P., Frey, K. S., Greenberg, M. T., Haynes, N. M., Kessler, R., Schwab-Stone, M. E. & Shriver, T. P. (1997). *Promoting social and emotional learning: Guidelines for educators*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Ersever, Ö. H. (1996). *Effects of the decision-making skills program and interaction group experience on university students' decision-making styles*. Doctoral Thesis. Ankara University Institute of Social Sciences, Ankara.
- Erdoğan, F. (2002). *Relationship between social skills, socio-economic status, gender and age in children at secondary school students*. Master Thesis, Ankara: Gazi University, Institute of Educational Sciences.
- Ergene T. & Yıldırım İ. (2004). Depression levels of university candidates. *Journal of Psychiatry, Psychology and Psycho-pharmacology*, 12(2), 91–100.
- Espejo-Siles, R., Zych, I. & Llorent, V.J. (2020). Empathy, social and emotional competencies, bullying perpetration and victimization as longitudinal predictors of somatic symptoms in adolescence. *Journal of Affective Disorders*, 271, 145-151.
- Feiring, C. (1999). Other-sex friendship networks and the development of romantic relationships in adolescence. *Journal of Youth and Adolescence*, 28, 495– 512.
- Fredricks, J. A., Blumenfeld, P.C. & Paris, A.H. (2004). School engagement: Potential of the concept, state of the evidence. *Review of Educational Research*, 74(1), 59-109.
- Furman, W. & Buhrmester, D. (1992). Age and sex differences in perceptions of networks of personal relationships. *Child Development*, 63(1), 103–115.
- Furtana, S. (2018). *Prediction of 7th and 8th grade students' empathic tendencies and social emotional learning skills to theory of mind*. Master's Thesis. Toros University, Mersin.
- Gravetter, J. F. & Forzano, L. B. (2012). *Research methods for the behavioral sciences* (4. Baskı). USA: Linda Schreiber-Ganster.
- Hall, G. Stanley (1904). *Adolescence: Its psychology and its relation to physiology, anthropology, sociology, sex, crime, religion, and education* (Vols. I & II). Englewood Cliffs, NJ: Prentice-Hall.
- Hay, D.F., Pawlby, S., Waters, C.S. & Sharp, D. (2008). Antepartum and post partum depression: Different effects on different adolescent outcomes. *Journal of Child Psychology and Psychiatry*, 49, 1079–1088.
- Horrocks, J. (1965). *Adolescent attitudes and goals*. Chicago: Aldine Pub.
- İşeri, I. (2016). *Examining the relationships between high school students' emotional intelligence levels and social emotional skills*, Sakarya University. Educational Sciences Unpublished master's thesis. Sakarya.
- Kaner, S. (2000). Peer relations scale and peer deviation scale development study. *Ankara University Journal of Faculty of Educational Sciences (JFES)*, 33(1), 77-89.
- Karagöz Y. (2016). *SPSS 23 and AMOS 23 applied statistical analysis*. Ankara: Nobel Publishing.
- Kathryn, R. W. (1991). Social competence at school: relation between social responsibility and academic achievement. *Review of Educational Research*, 61(1), 1-24.
- Körler, Y. (2011). *The loneliness levels of primary school secondary school students in terms of various variables and the relationships between loneliness and social emotional learning skills*. Unpublished master's thesis. Anadolu University, Institute of Educational Sciences, Eskişehir.
- Kramer, T.J., Caldarella, P., Christensen, L. & Shatzer, R.H. (2010). Social and emotional learning in the kindergarten classroom: evaluation of the strong start curriculum. *Early Childhood Education Journal*, 37(4), 303
- Laible, D. (2007). Attachment with parents and peers in late adolescence: Links with emotional competence and social behavior. *Personality and Individual Differences*, 43(5), 1185–1197.
- Lawrence A. K. & Donna K. (1982). A developmental analysis of the relation between peer acceptance and both interpersonal understanding and perceived social self-competencechild development. *Early Adolescence*, 53(6), 1485-1491.
- Layous, K., Nelson, S.K., Oberle, E., Schonert-Reichl, K. A. & Lyubomirsky, S. (2012). Kindness counts: Prompting pro-social behavior in preadolescents boosts peer acceptance and well-being. *PLoS One*, 7(12).
- Liu, G.Z., Zhang D.J., Pan Y.G., Chen W.F. & Ma Y.X. (2016). The relationship between middle school students' psychological suzhi and peer relationship: the mediating role of self-esteem. *Chin. J. Psychol. Sci.*, 39, 1290–1295.
- Lopes, P. N., & Salovey, P. (2004). Toward a Broader Education: *Social, emotional and practical skills*. In J. E. Zins, R. P. Weissberg, M. C. Wang, & H. J. Walberg (Eds.), *Building academic success on social and emotional learning: What does the research say?*. Teachers College Press.

- Lynch, A. D., Lerner, R. M. & Leventhal, T. (2013). Adolescent academic achievement and school engagement: An examination of the role of school-wide peer culture. *Journal of Youth and Adolescence*, 42(1), 6–19.
- McKenzie, M. (2004). Seeing the spectrum: north american approaches to emotional, social and moral education. *The Educational Forum*, 69(1), 79-90.
- Melikoğlu, M. (2020). *Investigation of the relationship between middle school students' problem solving skills, social adaptation skills, and learning social memory skills*. Unpublished Master's Thesis. Maltepe University, Graduate School of Education. Istanbul.
- Melikoğlu, M. & Bedel, A. (2021). Investigation of the relationship between middle school students' problem solving skills and social cohesion and social emotional learning skills. *Mediterranean Educational Research Journal*, 15(36), 38-54.
- Merter, K. (2013). Examining the relationship between secondary school students' social emotional learning skills and self-esteem (Example of Maltepe District). Master thesis. *Yeditepe University Institute of Social Sciences*, İstanbul.
- Nanda, S. (2005). Impact of age and family type on emotional maturity of urban adolescents. *E-Journal of AIAER*, 31, 99-10.
- Newcomb, A. F., & Bagwell, C. L. (1995). Children's friendship relations: A meta-analytic review. *Psychological Bulletin*, 117(2), 306–347.
- Omarzu, J. A. (2000). Disclosure decision model: determining how and when individuals will self-disclose. *Personal Soc. Psychol. Rev*, 4, 174-185.
- Öztürk, A. (2008). *Investigation of the effects of preschool education on the social skills of primary school 1st and 3rd grade students*. Master Thesis, Selcuk University, Institute of Social Sciences, Konya.
- Öztürk, I. (2017). *Examining the relationships between perceived parental attitudes and social-emotional learning skills of 11-14 age group adolescents*. Nişantaşı University Social Sciences Institute Unpublished master's thesis. Istanbul.
- Pedük, Ş. (2011). *Emotional development*. Child development (Ed: Aral and Baran). Istanbul: Ya-Pa Publishing.
- Pepler D & Bierman K. (2018). *With a little help from my friends: the importance of peer relationships for social-emotional development*. The Pennsylvania State University.
- Poorgholami, F., Aghae, E., Farsimadan, E., & Gharacheh, A. M. A. (2015). The effectiveness of self-knowledge training on self-esteem and peer relations in junior high school female students in farashband, Iran. *Mediterranean Journal of Social Sciences*, 6(6), 121-125.
- Raimundo, R., Marques-Pinto, A. & Lima, M.L. (2012). The effects of a social–emotional learning program on elementary school children: the role of pupils' characteristics. *Psychology and Schools*, 50(2), 165-180.
- Rohrbeck, C. A. (2003). *In book: Encyclopedia of primary prevention and health promotion chapter: Peer relationships*: Adolescence Publisher: Kluwer.
- Rubin, K., Bukowski, W. & Parker, J. (1998). *Peer interactions, relationships, and groups* W. Damon, N. Eisenberg (Eds.), *Handbook of child psychology: Vol. 3. Social, emotional, and personality development* (5<sup>th</sup> ed.), Wiley, New York.
- Santos JRA. (1999). *Cronbach's alpha: a tool for assessing the reliability of scales*. J Extension.
- Sarı, M. (2012). The effect of empathic classroom atmosphere and commitment to friends on high school students' quality of school life. *Educational Administration: Theory and Practice*, 18(1), 95-119.
- Schofield, M.J. & Kafer, N.F. (1985). Children's Understanding of Friendship Issues: Development by Stage or Sequence?. *Journal of Social and Personal Relationships*, 2(2), 151-165.
- Semrud-Clikeman, M. (2007). *Social competence in children*. New York: Springer.
- Shafer, D. S. & Zhang, Z. (2012). *Beginning statistics*. University of North Carolina.
- Şafak-Soyaslan, Ö. (2019). *Resistance to peer influence in adolescents: turkish adaptation, its relationship with attachment and rejection sensitivity*. Master Thesis, Istanbul University, Cerrahpaşa Graduate Education Institute, Istanbul.
- Taylor, R.D., Oberle, E., Durlak, J.A. & Weissberg, R. P. (2017). Promoting positive youth development through school-based social and emotional learning interventions: A meta-analysis of follow-up effects. *Child Development*, 88, 1156-1171.
- Totan, T. (2018). Development of Social and Emotional Learning Scale in Adolescents. *Marmara University Atatürk Education Faculty Journal of Educational Sciences*, 48(48), 41-58.
- Totan, T. & Kabakçı, Ö. (2010). The power of social emotional learning skills to predict bullying among elementary school students. *Journal of Uludağ University Faculty of Education*, 23(2), 575-600.

- Watkins, J. C. (2016). *An introduction to the science of statistics: From theory to implementation*, Preliminary Edition. Sented by Paul.
- Westenberg PM, Gullone E, Bokhorst CL, Heyne DA, King NJ. (2007). Social evaluation fear in childhood and adolescence: normative developmental course and continuity of individual differences. *British Journal of Developmental Psychology*, 25, 471–483.
- WHO Regional Office for Europe. (1996). *Regional guidelines: Development of health-promoting schools: A framework for action*. Manila: WHO Regional Office for the Western Pacific.
- Wilkinson, R. B. (2004). The role of parental and peer attachment in the psychological health and self-esteem of adolescents. *Journal of Youth and Adolescence*, 33(6), 479-493.
- Woodhouse, S., Dykas, M., & Cassidy, J. (2012). Loneliness and peer relations in adolescence. *Social Development*, 21(2), 273- 293.

