



**LIFE SATISFACTION AND INTERPERSONAL  
PROBLEM SOLVING IN UNIVERSITY STUDENTS:  
THE MEDIATING ROLE OF FORGIVENESS<sup>i</sup>**

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**Abstract:**

The present study examined the mediating role of forgiveness on the association between life satisfaction, and interpersonal problem solving approaches. Participants include 393 undergraduates (232 females and 161 males) from a university in Turkey's Eastern Anatolia region. Data were collected using the Satisfaction with Life Scale, the Interpersonal Problem Solving Inventory, and the Heartland Forgiveness Scale. Correlational results indicated that life satisfaction and forgiveness were significantly positively associated with positive interpersonal problem solving approaches and life satisfaction and forgiveness were significantly negatively associated with negative interpersonal problem solving approaches. The mediation role of forgiveness was tested using the two-step structural equation modeling and bootstrapping. Structural equation modeling results indicated that forgiveness partially mediated the impact of life satisfaction on positive and negative interpersonal problem solving approaches. Bootstrapping showed that life satisfaction exerted a significant indirect effect on positive and negative interpersonal problem solving approaches via forgiveness. The findings emphasized the role of youth forgiveness in explaining the relationship between life satisfaction, and interpersonal problem solving approaches. The possible explanations and limitations are discussed.

**Keywords:** life satisfaction, interpersonal problem solving, forgiveness, university students

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## 1. Introduction

The period university students are in is regarded as a significant and critical period developmentally (Rickwood, Deane, Wilson and Ciarrochi, 2005). During this period, students may face various problems as a result of different experiences (Benton, Robertson, Tseng, Newton and Benton, 2003; Aluede, Imhonde and Eguavoen, 2006; Yavuzer, Karataş and Gündoğdu, 2013; Aydın, 2017). One of the problems they encounter during these experiences is interpersonal problems. An interpersonal problem is defined as the situation in which at least one of the interacting parties perceives the difference between the present interaction and the ideal interaction, feels tension due to this difference, attempts to eliminate the tension, but these attempts are hampered (Öğülmüş, 2001). As for interpersonal problem solving, it is a cognitive and behavioral process during which the difference between the present situation experienced by an individual in interpersonal relations and the desired situation is perceived and which includes efforts aimed at eliminating the tension caused by this (Çam and Tümkaya, 2007).

Interpersonal problem solving is within the scope of social problem solving (Çam and Tümkaya, 2008). A social problem solving model is suggested for the solution of both personal and interpersonal problems. According to the social problem solving model, interpersonal problem solving is addressed in two dimensions, namely problem orientation and problem-solving style. Problem orientation is a metacognitive process, which is a motivational component of the problem solving process and reflects the problems experienced by an individual and his/her thoughts about solving these problems. Problem solving skills are cognitive and behavioral activities in which the individual tries to understand daily life problems and find effective solutions (D'Zurilla and Chang, 1995; D'Zurilla and Nezu, 1990, 2007; D'Zurilla and Maydeu-Olivares, 1995; Maydeu-Olivares and D'Zurilla, 1996).

Problem orientation, which determines the overall attitude toward problems, is based on the problems that an individual has faced in his/her past experiences and the strategies of coping with these problems and affects his/her perceptions and evaluation of the problems. These perceptions do not involve problem solving skills, however, they create an effect that increases or prevents the problem solving capability of an individual by affecting his/her attempts to solve the problem, the problem solving efficiency, and the time and efforts shown by the individual to solve the problem (Belzer, D'Zurilla and Maydeu-Olivares, 2002; D'Zurilla and Chang, 1995).

Problem orientation consists of positive and negative orientation toward the problem. Positive problem orientation is a factor that increases the possibility of positive problem solving outcomes. Individuals with positive orientation have high problem solving self-sufficiency. These individuals consider problem solving as a gain or an opportunity for a gain, believe that problems are solvable, know that effective problem solving requires time, effort, and permanence, and make efforts to solve problems rather than running away from the problems they encounter. On the other hand, negative problem orientation is a non-functional factor that causes negative

personal and social results and prevents effective problem solving. An individual that tends to have a negative orientation toward the problem believes that problems are unsolvable, doubts his/her problem solving ability and becomes disappointed and sad when he/she encounters a problem (Bell and D’Zurilla, 2009; D’Zurilla and Chang, 1995; Maydeu-Olivares and D’Zurilla, 1996).

### **1.1. Interpersonal Problem Solving Approaches and Life Satisfaction**

Life satisfaction is defined as the cognitive evaluation of an individual’s own life (Diener, 1994). In the studies conducted on life satisfaction, it was indicated that psychological variables are more effective (Myers and Diener, 1995). Indeed, various studies were found showing that there is a significant relationship between interpersonal problem solving approaches and well-being (D’Zurilla, 1986; Heppner, 1990; Nezu and D’Zurilla, 1989). Furthermore, in the study carried out by D’Zurilla, Nezu and Maydeu-Olivares (2002), it was revealed that there are significant relations between interpersonal problem solving approaches and life satisfaction. There are also studies that show that there is a positive correlation between life satisfaction and positive problem orientation and a negative correlation between life satisfaction and negative problem orientation (Chang, Downey and Salata, 2004; Hamarta, 2009). There is a relatively low number of studies investigating the relationship between life satisfaction and interpersonal problems solving approaches. Therefore, we think that it is important to investigate the relationship between life satisfaction and interpersonal problem solving approaches.

### **1.2. Life Satisfaction, Forgiveness and Interpersonal Problem Solving Approaches**

As can be understood from previous studies, it is clear that there is a significant relationship between life satisfaction and interpersonal problem solving approaches. Possible mediating variables between life satisfaction and interpersonal problem solving approaches were investigated within the framework of the literature, and it was estimated that forgiveness could be a mediating variable. Furthermore, many studies were found in which forgiveness was addressed as a mediating variable (Chung, 2014; Liu, Gong, Gao and Zhou, 2017; Ye, Ma, Yuan, Chen, Wang, Shi, Yu, Guo and Jiang, 2019). Many studies have shown that there is a significant positive relationship between life satisfaction and forgiveness, and forgiveness is a positive predictor of life satisfaction (Kelley and Miller, 2007; Kim, Miles-Mason, Kim and Esquivel, 2013; Thompson, Snyder, Hoffman, Michael, Rasmussen, and Billings, 2005; Eldeleklioğlu, 2015; Kaleta and Mroz, 2018). Moreover, there are also studies showing that individuals who are willing to forgive have higher life satisfaction (Munoz Sastre, Vinsonneau, Neto, Girard and Mullet, 2003).

Forgiveness is defined as a conscious decision in which an individual gives up on one’s legal right to remedy or take revenge for a damaging action performed by a person who is important for him/her (Scobie and Scobie, 1998). Forgiveness is addressed in three dimensions, namely forgiveness of self, forgiveness of others, and forgiveness of situations (Thompson et al., 2005). Forgiveness of self is explained as

developing positive feelings by reducing the anger and rage toward oneself (Hall and Fincham, 2005), forgiveness of others is defined as willingly renouncing the feelings of revenge against the person who has done something wrong to him/her (Enright, 1996), and forgiveness of situations is defined as turning the reactions toward the situations experienced from negative to positive (Thompson et al., 2005).

Various models have been developed for explaining forgiveness. The integrated forgiveness model indicates that individuals decide on how to react to a damaging incident they encounter in their lives by making a positive, negative, or neutral evaluation of the way that an incident occurs before reacting to the incident (Scobie and Scobie, 1998). Considering this, the result of this evaluation can be the determinant of both the forgiveness behavior and interpersonal problem solving approaches. In other words, the positive or negative evaluation of a problem by an individual may determine both the behavior of forgiveness and interpersonal problem solving approaches. This is because the overall attitude toward problems is the determinant of interpersonal problem solving approaches (D’Zurilla and Chang, 1995). Therefore, forgiveness may play a significant role in the effect of life satisfaction on interpersonal problem solving approaches.

In this study, it was aimed to examine the possible mediating role of forgiveness in path analyses. Based on the previous literature, we hypothesize that forgiveness may play a mediating role in the relationship between life satisfaction and interpersonal problem solving approaches. In other words, it is expected that life satisfaction may facilitate forgiveness, and the behavior of forgiveness may lead to positive or negative interpersonal problem solving approaches. While previous studies show that forgiveness can mediate the relationships between different variables, according to our knowledge, the mediating role of forgiveness in the relationship between life satisfaction and interpersonal problem solving approaches has been investigated in none of the studies in the Turkish sample.

## **2. Method**

### **2.1. Participants and procedure**

The participants were determined using the criterion sampling and convenience sampling methods. In this study, the fact that university students studied at 2nd and 3rd grades was considered as a criterion because it was indicated that the first year of higher education is the most challenging period of students’ adaptation process (Gifford, Mianzo and Briceno-Perriott, 2006; Mercan and Yıldız, 2011; Thurber and Walton, 2012). Furthermore, it was stated that university students who are in the final year of their higher education life have worries about the future and getting a job (Dursun and Aytaç, 2012). Accordingly, first-grade students were excluded from the research because of their adaptation problems, and final-grade students were excluded since they have worries about the future. Students who volunteered to participate in the study and who were suitable for the specified criterion were determined using the convenience sampling method. A cross-sectional survey was conducted between

October 2018 and December 2018 with 393 [232 (59%) female, 161 (41%) male] voluntary university students studying at the 2nd and 3rd formal education grades at a state university in the Eastern Anatolia Region of Turkey. The age range was between 18 and 34, the age mean was 21.14 and the standard deviation of the ages was 2.11. Of the participants, 189 (48.1%) study in formal education programs in the second grade and 204 (51.9%) in the third grade. The participants' descriptive statistics were presented in Table 1. We excluded 18 participants from analyzes due to missing or inaccurate data. The questionnaires were administered to classroom groups (40 to 75 students) in the classroom. The participants were not given any promise of reward. The questionnaires were printed as 3 booklets in order to balance sequential effect control. 3 booklets were designed in a way which each questionnaire could appear at the beginning, middle and end of the booklet. We explained that participants could withdraw from the study whenever they want. Each participant took about 25 to 30 min to complete the measures.

**Table 1:** Participants' descriptive statistics

Variable	<i>f</i>	%
Gender		
Female	232	59
Male	161	41
Age Range		
18-22	320	81,3
23 and upper	73	18.7
Grades		
Second	189	48.1
Third	204	51.9
Academic Department		
Psychology	177	45
Social Work	56	14.2
Turkish Language and Literature	69	17.6
English Language and Literature	91	23.2

## 2.2. Measures

### 2.2.1. Satisfaction with Life Scale [SWLS (Diener et al., 1985)]

This scale, consisting of five items (e.g., I am satisfied with my life), was of the 7-point Likert type scale ranging from 1 = strongly disagree to 7 = strongly agree. A total score ranging from 5 to 35 was possible, with a higher score indicating a higher life satisfaction level. The Turkish adaptation of this scale was performed by Kökler (1991). The test-retest reliability of the scale was .85. The Cronbach alpha coefficient for the present study was .74.

### 2.2.2. Interpersonal Problem Solving Inventory [IPSI (Çam and Tümkaya, 2007)]

This inventory was developed by Çam and Tümkaya (2007) in order to measure problem solving approaches and skills among university students with the age range of 18-30 years. IPSI consists of 50 items and 5 subscales: Approaching problems in a

negative way (e.g., I feel helpless when I have a problem), constructive problem solving (e.g., I try to find more than one solution to solve a problem), lack of self-confidence (e.g., When I have a problem, I can't change my situation no matter what I do for a solution), unwilling to take responsibility (e.g., When I have a problem with someone I do not try to change the situation unless the other party apologizes) and insistent-persevering approach (When I have a problem in my interpersonal relationships, I absolutely try to solve the problem). Each item has rating with a range of 1 (strongly disagree) and 5 (strongly agree). Cronbach alphas for IPSI subscales ranged from .67 to .91. In the present study, the IPSI have acceptable Cronbach alphas; .89, .85, .73, .71, .69 for approaching problems in a negative way, constructive problem solving, lack of self-confidence, unwilling to take responsibility, insistent-persevering approach sub-scales respectively.

### **2.2.3. Heartland Forgiveness Scale [HFS (Thompson et al., 2005)]**

The HFS consists of 18 items and three dimensions, forgiveness of self (e.g., Although I feel bad at first when I mess up, over time I can give myself some slack), forgiveness of others (e.g., I continue to punish a person who has done something that I think is wrong), and forgiveness of situations (e.g., When things go wrong for reasons that can't be controlled, I get stuck in negative thoughts about it). HFS is a 7-point Likert-type scale ranging from "almost always false than true" (1) to "almost always true of me" (7). Higher scores on each subscale reflect a higher level of forgiveness in each domain. The Turkish version of HFS was adopted by Bugay and Demir (2010). Bugay and Demir (2010) reported that Turkish version of the HFS has acceptable reliability (Cronbach alphas for HFS overall was .81, forgiveness of self-subscale .64, forgiveness of other subscale .79, and forgiveness of situation subscale .76) and validity ( $\chi^2/df = 2.33$ , GFI = .92, CFI = .90, RMSEA = .06). In the present study, the HFS have acceptable Cronbach alphas for HFS overall was .76, forgiveness of self-subscale .69, forgiveness of other subscale .72, and forgiveness of situation subscale .74.

### **2.3. Data analysis**

Descriptive statistics (mean, standard deviations, skewness, and kurtosis) were tested with IBM SPSS Statistics version 22. Afterwards, the relationships between interpersonal problem solving approaches, life satisfaction and forgiveness measures were examined by correlation analysis. The mediation role of forgiveness was tested using a two-stage structural equation analysis procedure. Firstly, the measurement model was tested and in the secondly, the structural equation model was tested. The measurement model was calculated to assess whether each of the latent variables was represented by its indicators. If the measurement model turns out satisfactory, then the structural equation model can be tested using the maximum likelihood estimation in the AMOS Graphics. Besides,  $\chi^2$ , CFI, IFI, TLI, SRMR and RMSEA were examined as goodness of fit indices. The accepted critical value for  $\chi^2/df$  is  $\leq 5$  (Bollen, 1989), for CFI, IFI and TLI is  $\geq .90$  (Bentler, 1990; Hooper, Coughlan and Mullen, 2008) and for SRMR and RMSEA is  $\leq .80$  (Hu and Bentler, 1999; Schreiber, Nora, Stage, Barlow and King,

2006). In addition to the SEM, a bootstrapping technique was used in this study to test the significance of indirect effects. This bootstrapping procedure increases the representative power of the sample. It also gives an opportunity to evaluate the significance of an indirect effect in a 10,000 sample through resampling.

### 3. Results

#### 3.1. Descriptive statistics and relationships between variables

Descriptive statistics and bivariate correlations are displayed in Table 2. Inspection of the skewness and kurtosis indices for all variables in the study proved normal (skewness ranged from  $-.38$  to  $.84$ , and kurtosis from  $-.69$  to  $-.05$ ). As it can be seen from Table 2, there are significant positive correlations between life satisfaction and positive interpersonal problem solving approaches (between  $r = .38, .24$ ), and between forgiveness and positive interpersonal problem solving approaches (between  $r = .11, .41$ ), and between life satisfaction and forgiveness (between  $r = .12, .26$ ). On the other hand, negative significant correlations were found between life satisfaction and negative interpersonal problem solving approaches (between  $r = -.18, -.34$ ), and forgiveness and negative interpersonal problem solving approaches (between  $r = -.12, -.33$ ). These results provide a solid foundation for structural equation model analysis.

#### 3.2. Testing measurement model

There are four latent variables (life satisfaction, forgiveness, positive interpersonal problem solving, negative interpersonal problem solving) and 13 observed variables in the measurement model. It was found that the coefficients in the measurement model are significant and that the standardised regression coefficients vary between  $.48$  and  $.88$ ;  $p < .001$  (see Table 2). The goodness fit indices of the measurement model were found to be acceptable with the following values:  $\chi^2 (58, N = 393) = 193.52, p < .001$ ; CFI =  $.90$ ; GFI =  $.93$ ; IFI =  $.90$ ; SRMR =  $.056$ ; RMSEA =  $.077$  CI[ $.065, .089$ ].

#### 3.3. Testing the Structural equation model

First, the full mediating role of forgiveness between life satisfaction and interpersonal problem solving approaches was tested (Model I). This model showed an acceptable fit to the data, even though the CFI and IFI values were low:  $\chi^2 (61, N = 393) = 226.36, p < .001$ ; CFI =  $.87$ ; GFI =  $.93$ ; IFI =  $.87$ ; SRMR =  $.074$ ; RMSEA =  $.083$  CI[ $.072, .095$ ]; AIC =  $286.36$ ; ECVI =  $.73$ . In addition, all paths in the model were significant ( $p < .001$ ). Then, links were added to positive and negative interpersonal problem solving approaches from life satisfaction to test the partial mediator role of forgiveness. (Model II). When these relationships were added (Model II) showed an satisfactory fit to data:  $\chi^2 (59, N = 393) = 196.26, p < .001$ ; CFI =  $.90$ ; GFI =  $.93$ ; IFI =  $.90$ ; SRMR =  $.064$ ; RMSEA =  $.077$  CI[ $.065, .089$ ]; AIC =  $260.26$ ; ECVI =  $.66$ .

After testing the partial and full mediating models, because the AIC and ECVI values of the partial mediator model were smaller than the AIC and ECVI values of the

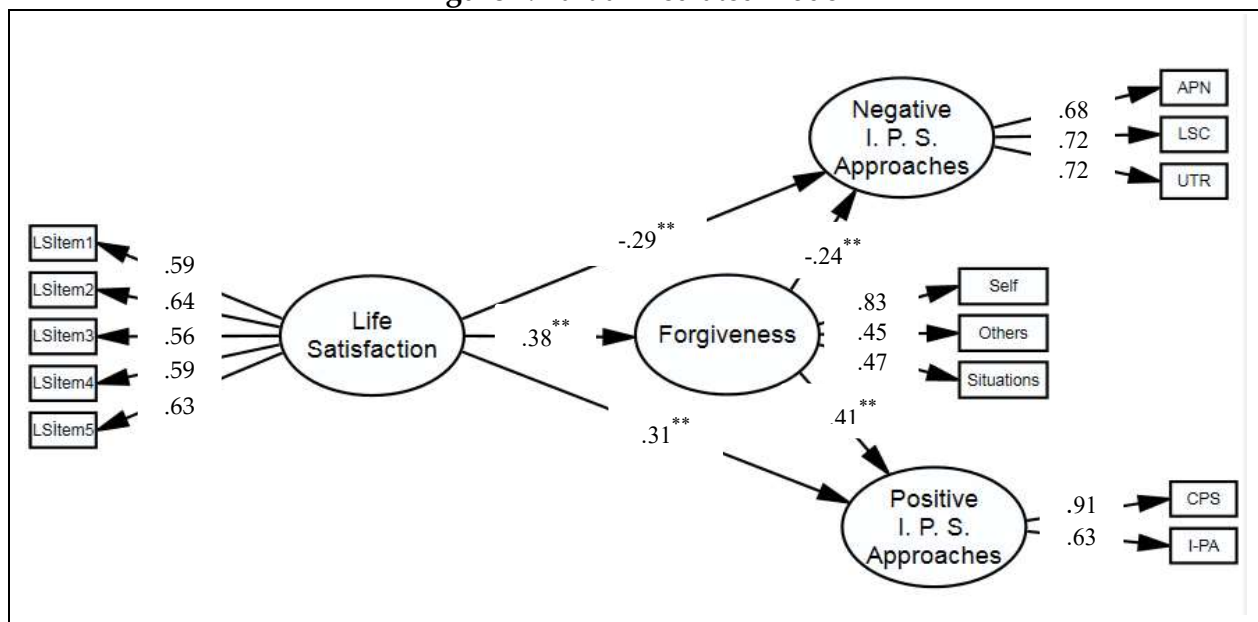
full mediator model a partial mediating model is preferred as the best model. The statistics associated with the path coefficients can be seen in Fig. 1.

**Table 2:** Relationships among the variables and descriptive statistics and factor loadings ( $\lambda$ ),  $R^2$ , skewness, and kurtosis for the measurement model

Variables	1	2	3	4	5	6	7	8	9
1. LS	-								
2. Self <sup>F</sup>	.26**	-							
3. Others <sup>F</sup>	.24**	.36**	-						
4. Situations <sup>F</sup>	.12*	.39**	.47**	-					
5. APN	-.34**	-.31**	-.33**	-.29**	-				
6. LSC	-.23**	-.11*	-.15**	-.12*	.47**	-			
7. UTR	-.18**	-.19**	-.14**	-.18**	.47**	.55**	-		
8. CPS	.38**	.41**	.21**	.20**	-.03	-.12*	-.12*	-	
9. I-PA	.24**	.32**	.15**	.11*	.05	.01	-.07	.57**	-
Mean	22.50	28.48	27.56	29.03	39.79	13.32	11.84	54.13	20.42
SD	6.39	5.73	7.21	6.25	11.99	4.53	4.04	9.70	3.96
$\lambda$	.60	.77	.48	.49	.74	.67	.68	.88	.65
$R^2$	.36	.59	.23	.24	.55	.46	.47	.78	.42
Skewness	-.38	-.35	-.31	-.27	-.30	.84	.44	.21	.04
Kurtosis	-.62	-.35	-.09	-.12	-.69	-.05	-.60	-.45	-.30

\* $p < .05$ ; \*\* $p < .01$ ; LS Life Satisfaction; <sup>F</sup> subscales of the Forgiveness; APN Approaching Problems in a Negative Way ; LSC Lack of Self-Confidence , UTR Unwilling to Take Responsibility ; CPS Constructive Problem Solving; I-PA Insistent-Persevering Approach.

**Figure 1:** Partial mediated model



**Note:** N= 393; \*\* $p < 0.001$ ; LSitem items of the Life Satisfaction Scale; IPS Interpersonal Problem Solving; APN Approaching Problems in a Negative Way; LSC Lack of Self-Confidence, UTR Unwilling to Take Responsibility; CPS Constructive Problem Solving; I-PA Insistent-Persevering Approach



### 3.4. Bootstrapping

With the bootstrapping process, it is aimed to find additional proof of the significance of the direct and indirect effects of a partial mediating model. We used a bootstrapping process to test the indirect pathway from life satisfaction to positive and negative interpersonal problem solving approaches (Model 2). Table 3 shows the direct and indirect roles and their associated 95% confidence intervals. The indirect effect of life satisfaction on positive and negative interpersonal problem solving approaches mediated by forgiveness was significant (bootstrap estimate for positive interpersonal problem solving approaches = .16, 95% CI= .09, .27; bootstrap estimate for negative interpersonal problem solving approaches = -.09, 95% CI= -.20, -.03). Empirical 95% confidence interval did not consist of zero, signifying that life satisfaction exerted a significant indirect effect on positive and negative interpersonal problem solving approaches via forgiveness.

**Table 3:** Bootstrapping result of partial mediated model

Model Pathway	Estimate	%95 Confidence Interval	
		Lower	Upper
Direct effect			
Life Satisfaction → Forgiveness	.38	.22	.54
Life Satisfaction → Positive IPS Approaches	.31	.17	.44
Life Satisfaction → Negative IPS Approaches	-.29	-.45	-.14
Forgiveness → Positive IPS Approaches	.41	.27	.55
Forgiveness → Negative IPS Approaches	-.24	-.43	-.08
Indirect effect			
Life Satisfaction → Forgiveness → Positive IPS Approaches	.16	.09	.27
Life Satisfaction → Forgiveness → Negative IPS Approaches	-.09	-.20	-.03

### 4. Discussion

The aim of this study is to investigate the mediating role of forgiveness in the relationship between life satisfaction and interpersonal problem solving approaches of university students. As hypothesized, this study revealed that forgiveness plays a mediating role in the relationship between life satisfaction and interpersonal problem solving approaches.

This result has shown that a high level of life satisfaction can positively affect positive interpersonal problem solving approaches both directly and through forgiveness, and can negatively affect negative interpersonal problem solving approaches. It was determined that forgiveness partially mediates the relationship between life satisfaction and positive and negative interpersonal problem solving approaches of university students. It was found that forgiveness has a partial mediating effect in the relationship between life satisfaction and interpersonal problem solving approaches ( $\beta = .16$ ,  $p < .001$  for positive interpersonal problem solving approaches;  $\beta = -.09$ ,  $p < .001$  for negative interpersonal problem solving approaches).

It can be said that life satisfaction strengthens positive interpersonal problem solving approaches and plays a significant role in increasing forgiveness among university students. This study also shows that the level of forgiveness may increase with the increase in life satisfaction, and the use of positive interpersonal problem solving approaches may increase with the increase in forgiveness. On the other hand, it can be said that negative interpersonal problem solving approaches may strengthen and forgiveness behaviors may weaken with the decrease in the life satisfaction levels of university students, and negative interpersonal problem solving approaches may strengthen with this decrease in forgiveness behaviors.

In this study, the partial mediating role of forgiveness was defined in the relationship between life satisfaction and interpersonal problem solving approaches. Although the relationship between life satisfaction and interpersonal problem solving approaches has been investigated in many studies, to our knowledge, the mediating role of forgiveness in the relationship between life satisfaction and interpersonal problem solving approaches has not been investigated in any study. Nevertheless, certain studies have shown the mediating effect of forgiveness in the relationship between different variables. For example, it was found that forgiveness partially mediates the relationship between empathy and health-related quality of life (Ye, Ma, Yuan, Chen, Wang, Shi, Yu, Guo and Jiang, 2019) and coping humor and mental well-being (Kayaş and Satıcı, 2019).

In this study, it was determined that the direct effects are significant. The most powerful direct effect in the model was found to be between forgiveness and positive interpersonal problem solving approaches. Furthermore, it was observed that there is a significant positive relationship between forgiveness and positive interpersonal problem solving approaches, and it was determined that forgiveness significantly predicts positive interpersonal problem solving approaches ( $\beta = .41, p < .001$ ). Forgiveness has been defined as the gradual increase in good intentions through compromise after a possible action of injustice (McCullough, Worthington and Rachal, 1997). The fact that individuals exhibit positive interpersonal problem solving approaches together with forgiveness can be regarded as an expected result. This is because it is expressed that individuals with a high tendency to forgive turn their thoughts on their lives into positive (Thompson et al., 2005). It can be said that this positive assessment of the lives of individuals will be positively reflected in their interpersonal problem solving approaches.

Another finding of the study is that forgiveness directly affects the negative interpersonal problem solving approaches of university students. A significant negative relationship was found between forgiveness and negative interpersonal problem solving approaches in this effect, and it was determined that forgiveness predicts negative interpersonal problem solving approaches ( $\beta = -.24, p < .001$ ). In forgiveness, which is qualified as an interpersonal action, it was expressed that individuals give up on their desire to cognitively and emotionally respond to the possible damaging actions of the other party and they exhibit a positive attitude (Thompson et al., 2005). Similarly, it was determined that individuals who can forgive a possible negative action are

individuals who can establish close interpersonal relationships (Yamhure-Thompson and Synder, 2003) and they restructure interpersonal relationships as a result of forgiveness (Gradisek, 2012). This finding of the study makes us think that forgiveness may be a protective factor for negative interpersonal problem solving approaches.

According to the research results, life satisfaction directly affects the forgiveness behaviors of university students. In this effect, it was observed that there is a significant positive relationship between life satisfaction and forgiveness, and life satisfaction significantly predicts forgiveness ( $\beta = .31$ ,  $p < .001$ ). It is observed that this result is consistent with the findings of the previous research. For example, in the study carried out by Kaleta and Mroz (2017), it was determined that there are significant positive relationships between the life satisfaction and forgiveness levels of young adults aged between 19 and 30 years. Through life satisfaction, individuals make cognitive assessments on their life quality and areas of satisfaction such as family, friends, and environment that mean something for them (Diner et al., 1999). It is believed that these subjective assessments of an individual may also affect the behavior of forgiveness because various studies have shown that individuals with high life satisfaction tend to forgive more (Munoz Sastre, Vinsonneau, Neto, Girard, and Mullet, 2003; Kelley and Miller, 2007). Therefore, life satisfaction may be regarded as an element that determines the behavior of forgiveness. Furthermore, it can be said that high life satisfaction increases an individual's willingness to forgive.

#### **4.1. Limitations**

There are certain limitations in this study. The first limitation of this study is that the data are collected with the self-report method that may reduce the internal validity. Collecting data using more than one method (e.g., interview and observation) may help decrease the effect of subjectivity. The second limitation is that the participants consist of students of a university in the Eastern Anatolia Region of Turkey. Therefore, the generalizability of the findings of this study is limited. Using different populations and larger samples may help increase the generalizability. The third limitation is that this study has a cross-sectional design. Therefore, causality may not be mentioned. Future studies may help reveal the causal aspects by using different designs such as longitudinal design. The last limitation is that the mediating role of forgiveness is tested in this study. The mediating effect of different variables (e.g., hope and self-compassion) in the relationship between life satisfaction and interpersonal problem solving approaches can be examined in future studies.

#### **4.2. Implications**

This research reveals significant results despite its limitations and makes significant contributions to the literature of interpersonal problem solving and positive psychology. Firstly, it is the first study to offer a quantitative model that defines the relationships between interpersonal problem solving approaches and positive psychological structure (life satisfaction and forgiveness) in the sample of Turkish university students. Secondly, the results of the study have shown that life satisfaction

and forgiveness may affect interpersonal problem solving approaches. Therefore, counseling services and other professionals may develop interpersonal problem solving training programs considering the role of life satisfaction and forgiveness because interpersonal problem solving training has had significant effects on decreasing the social adaptation problems and depressive symptoms among children and adolescents who have inadequate problem solving skills (for a review, see Nezu, 2004).

### 4.3. Conclusions

This study proved that mediational role of forgiveness between life satisfaction and interpersonal problem solving approaches in the sample of Turkish university students. The current study has provided more understanding for both practitioners and researchers.

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