# The Relationship Between Rumination about Interpersonal Offense and Psychological Well-Being: The Mediation Effect of Forgiveness

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# Abstract

The present study set out to explore the mediating role of forgiveness between the levels of rumination about interpersonal offense and psychological well-being in university students. The research utilized a correlational research design. The participant group consisted of a total of 342 students who were studying in the teaching departments of Gaziantep University in the 2020-2021 academic year. The Turkish versions of the Psychological Well-Being Scale, the Rumination about an Interpersonal Offense Scale, and the Heartland Forgiveness Scale were used as data collection tools. Structural equation modeling was performed on the data using the AMOS 20.0 program to analyze the direct effect of the rumination about interpersonal offense variable and the mediating effect of the forgiveness variable on the variable of psychological well-being. The results of the research revealed a significant negative correlation between rumination about interpersonal offense and forgiveness as well as rumination about interpersonal offense and psychological well-being, while forgiveness and psychological well-being were detected to be positively correlated. Finally, according to the SEM analysis, it was concluded that forgiveness is a partial mediator in the relationship between rumination about interpersonal offense and psychological well-being. Individual and group counseling or psychoeducation programs may be prepared based on cognitive-behavioral therapy. These counseling activities or programs should focus on context-specific rumination rather than general rumination and forgiveness and cognitions about forgiveness.

Keywords: Rumination About Interpersonal Offense, Forgiveness, Psychological Well-Being

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## **INTRODUCTION**

Psychological well-being has been widely investigated as a strength of individuals in recent years (see, for example, Khan, 2013; Segrin & Taylor, 2007). In its general definition, psychological well-being expresses the existential tasks of life such as having meaningful goals, growing and developing as an individual, and establishing qualified relationships with others (Keyes et al., 2002). Psychological well-being is explained within the framework of a model with six dimensions (Ryff, 1989). These dimensions entail being able to feel good by being aware of one's own limitations (self-acceptance), establishing and maintaining warm and trusting interpersonal relationships (positive relations with others), creating an environment for oneself in line with one's personal needs and desires (environmental mastery), maintaining one's individuality in a broad social context while at the same time maintaining a sense of personal control and personal authority (autonomy), finding meaning in personal endeavors and in difficulties experienced (purpose in life), and finally, the individual's maximum utilization of his or her own talents and capacities (personal growth) (Keyes et al., 2002).

Studies demonstrate that psychological well-being is positively associated with life satisfaction (Temiz, 2019; Demir et al., 2021). Functional strategies (positive re-evaluation, refocus on the plan) of the cognitive emotion regulation strategies are correlated with high psychological well-being, whereas non-functional strategies (rumination, disasterization, self-blame) are connected to low psychological well-being (Balzarotti et al., 2014). Furthermore, it was revealed that psychological well-being increases essential skills in occupational life (Kanbur & Mazioğlu, 2021). Psychological well-being is also positively correlated (İmiroğlu et al., 2021) with cognitive flexibility, conscious awareness, and hope (Khan, 2013). Furthermore, perceived social support (Tosun, 2021) and social skills (Segrin & Taylor, 2007) have been determined to have positive relationships with psychological well-being. However, a negative correlation has been determined between psychological well-being, academic procrastination, and academic perfectionism (Aygün & Topkaya, 2022) as well as between psychological well-being and depression and anxiety (Liu et al., 2009). As abovementioned research results indicate, psychological well-being is positively associated with positive psychological traits and negatively associated with negative traits. Therefore, it is significant to enhance individuals' psychological well-being levels.

Forgiveness is also one of the variables that is linked with psychological well-being (Halisdemir, 2013; Thompson et al., 2005). Forgiveness is an internal pro-social shift against a perceived violation located in a specific interpersonal context (McCullough et al., 2000). The Enright and the Human Development Study Group (1991), which follows North (1987), defined forgiveness as a willingness to abandon the right to condemnation, resentment, and revenge against someone who has treated the individual unjustly, and to foster feelings of compassion, generosity, and even love (cited in Enright and the Human Development Study Group, 1996). Thompson et al. (2005) also defined forgiveness as the transformation of the negative reaction to a perceived violation, violator, and the difficulties created by the violation into a neutral or positive state. The source of a violation, and therefore the object of forgiveness, might be the person himself/herself, another person or persons, or a situation that the individual considers to be beyond their control (for example, a disease, "fate", or a natural disaster). Everett et al. (2004) state that although forgiveness requires a result in which positive emotions are felt, it is a process in which non-forgiveness is reduced and can also result in neutral or positive emotions.

When the studies on forgiveness are examined, it has been concluded that while the tendency to forgive affects mental health in a positive way, feelings of revenge have a negative effect (Akın et al., 2012). In addition, forgiving oneself and another person is positively related to mental health, and self-forgiveness is positively associated with physical health (Avery, 2008). According to the study by Gull and Rana (2013), forgiveness positively affected individuals' tolerance, happiness, satisfaction, confidence, relaxation, and social interactions, and their negative thoughts decreased. Other studies reported that self-forgiveness is a meaningful predictor of psychological well-being (Halisdemir, 2013), that forgiveness and life satisfaction are positively and significantly related, and that forgiveness has a mediating role between continuous anger and life satisfaction (Topbaşoğlu, 2016).

Thompson et al. (2005) found that forgiveness predicts well-being significantly; it has a negative correlation with depression, anxiety, and constant anger but a positive and significant relationship with life satisfaction. Similarly, Ysseldyk et al. (2007) revealed that forgiveness significantly correlates with psychological health (low depression and high life satisfaction).

When the relationship of forgiveness with psychological well-being and other positive psychological variables is considered, the importance of forgiveness in the personal lives of individuals becomes apparent. For this reason, addressing the factors that may negatively affect the behavior of forgiveness is important. Forgiveness is an important variable that is negatively associated with rumination in the literature. Rumination is generally defined as a repetitive way of thinking that involves concentrating on information and immersing in thinking, namely, ruminating cognitively (Cann et al., 2011). To put it another way, it enters the conscience and depletes cognitive resources, and thus, impairs cognitive performance (Scott & McIntosh, 1999). The studies between rumination and forgiveness revealed a negative association between forgiveness and rumination (Colak & Güngör, 2021; Suchday et al., 2006; Toussaint et al., 2022; Ysseldyk et al., 2007), and forgiveness and rumination about anger are negatively correlated (Barber et al., 2005). Bugay's (2010) study found a negative and significant association between self-forgiveness and rumination. Likewise, some other studies indicate that rumination adversely affects psychological well-being. To illustrate, Borawski (2021) concluded that rumination and psychological well-being are correlated negatively, and rumination is the mediating variable between loneliness and psychological well-being. Rumination is reported as a negative and significant predictor of psychological well-being (Hill & Watkins, 2017), and there is a negative association between rumination and psychological well-being (Li et al., 2022).

The participants of this research are university students, who are young adults for whom interpersonal relations are highly important. It is expected that investigating the relationship between psychological well-being, forgiveness, and rumination about interpersonal offense conjunctly will contribute to the literature. This is because this research adopts McCullough et al.'s (2007) hypothesis which postulates that the increase in rumination precedes the decrease in forgiveness. Considering this hypothesis, this study attempts to investigate how the relationship between two variables, i.e. forgiveness and rumination about interpersonal offense, affect psychological well-being. Therefore, it was foreseen that a decrease in rumination about interpersonal offense would increase forgiveness, and an increase in forgiveness would increase the psychological well-being levels of young adults. It was stated that forgiveness is an interpersonal process (Eaton et al., 2006), and this study will produce original results with its aspect of addressing context-specific rumination about interpersonal relationships instead of continuous rumination. With this in mind, this research set out to examine the mediating role of forgiveness between the rumination about interpersonal offense levels and university students' psychological well-being levels. Drawing on this general purpose, the following hypotheses are investigated in the study:

1. Rumination and psychological well-being are negatively correlated.

- 2. Rumination and forgiveness are negatively correlated.
- 3. Psychological well-being and forgiveness are positively correlated.

4. Forgiveness has a mediating effect on the relationship between rumination and psychological well-being.

# METHOD

## **Research Model**

Since the relationship between the variables of forgiveness, psychological well-being, and rumination about the interpersonal offense of university students were tested and evaluated through the mediation method with the theoretical model put forward in this study, the study was correlational

research which includes causal comparison. The structural equation model developed with the variables of forgiveness, psychological well-being, and rumination was tested using the AMOS 20.0 program. The assumptions of SEM regarding (normality of observed and hidden variables, the relationship between the variables being linear, no existence of outliers in the series, each hidden variable having three or more observed variables to measure, no correlation between error terms, no multiple linear connections between the variables, and the adequacy of the sample size for the study) were met in the study (Karagöz, 2017, p. 456). The researcher attempted to examine the following through SEM:

- the correlation between rumination and psychological well-being,
- the correlation between rumination and forgiveness,
- the correlation between forgiveness and psychological well-being,
- the role of forgiveness between rumination and psychological well-being.

In this respect, a theoretical structural equation model consisting of three parts showing the relationship between rumination, psychological well-being, and forgiveness of university students was created. In this model, rumination was determined as the exogenous (external/independent) variable, forgiveness was set as the mediator (moderator), and psychological well-being was selected as the endogenous (internal/dependent) variable.

## **Participant Group**

The participants consisted of undergraduate students who were studying at different teaching departments of Gaziantep University. The data were collected in the 2020-2021 academic year. The sample was selected by using the convenience sampling method because it involves easy accessibility, volunteerism, and consists of participants from existing ones (Gezer, 2021). Of the students who participated in the study, 263 were female (76.9%), 79 were male (23.1%); as regards the grades, 123 were freshmen (36%), 72 were sophomores (21.1%), 68 were junior students (19.9%), and 79 were senior students (23.1%). Concerning the departments, 124 of them were studying in the Turkish Language Teaching Department (36.3%), 99 of them were students of Guidance and Psychological Counseling (28.9%), 50 of them were students of English Language Teaching (14.6%), 38 of them were Primary School Mathematics Teaching students (11.1%), 26 were Classroom Teaching students (7.6%), and five of them were students in the Physical Education Teaching Department (1.5%).

## **Data Collection Instruments**

In the research, the "Rumination about an Interpersonal Offense Scale", "Psychological Well-Being Scale", "Forgiveness Scale" and a demographic information form were used to gather data. Information about the three scales is presented below. To conduct the validity study in the research, confirmatory factor analysis was calculated for all scales, and for the reliability study, Cronbach  $\alpha$ coefficients were calculated for the total and sub-dimensions of the scales.

*Personal Information Form:* This form was prepared by the researcher to collect information about the gender, grade level, and departments of the students.

**Rumination about an Interpersonal Offense Scale:** The scale, developed by Wade et al. (2008) and adapted into Turkish by Oral and Arslan (2017), is a one-dimensional, 6-item scale. A sample item in the scale is "*I can't stop thinking about how I was wronged by this person*". The Cronbach  $\alpha$  coefficient of the scale is .88. The minimum score that can be obtained from the scale is 6 points, and the maximum is 30 points. As the scores from the scale increase, so does the level of rumination related to interpersonal offense in the individual. There is no reversely rated item on the scale. In this study, the Cronbach  $\alpha$  value of the scale is calculated as .88.

**Psychological Well-Being Scale:** The scale was developed by Diener et al. (2009) to measure socio-psychological well-being that complements existing well-being measures. Telef (2013) adapted the scale to Turkish. The scale is a 7-point Likert-type instrument. A sample item is "I have a purposeful and meaningful life". All items are presented in positive expressions. The scores to be taken from the scale range from 8 to 56. A high score indicates that the person has many psychological resources and powers. The Cronbach  $\alpha$  value of the psychological well-being scale was calculated as .81 in the current study.

Heartland Forgiveness Scale: The scale was developed by Thompson et al. (2005) to measure individuals' forgiveness tendencies. It is a 7-point-type scale that consists of 18 items. The scale has three sub-dimensions: forgiving oneself, forgiving others, and forgiving the situation. One sample item is "Although I feel bad at first when I mess up, over time I can give myself some slack". Bugay and Demir (2010) adapted the scale for the Turkish culture. Then, Bugay et al. (2012) examined the psychometric properties of the scale with a larger sample. In the current study, the Cronbach  $\alpha$  internal consistency coefficient of the Turkish form of the scale was found as .73 for the self-forgiveness subscale, .79 for the forgiveness of others subscale, and .77 for the forgiveness of the situation subscale. The Cronbach  $\alpha$  value for the entire scale was calculated as .84.

The confirmatory factor analyses (CFA) of the scales were performed with the AMOS20.0 program. In the study, CFA was applied to the scales adapted to Turkish. The fit values that emerged after the CFA were compared with the statistical values related to the fit of the SEM (Meydan & Şeşen, 2011), and the scales were found to be valid. The fit values for the scales after CFA are provided in Table 1.

Values of fit	Good fit	Acceptable fit	Heartland Forgiveness Scale CFA values	Rumination about an Interpersonal Offense Scale CFA values	Psychological Well- Being Scale CFA values
$\chi^2$	Not significant	-	350.11	9.56	55.21
$\chi^2/df$	<u>≤</u> 3	≤4-5	2.9	1.5	3.1
Standardized RMR	$\leq 0.05$	0.06 - 0.08	.08	.02	.04
RMSEA	$\leq 0.05$	0.06 - 0.08	.07	.04	.78
GFI	$\geq 0.90$	0.89 - 0.85	.89	.99	.96
AGFI	$\geq 0.90$	0.89 - 0.85	.85	.96	.92
NFI	$\geq 0.95$	0.94 - 0.90	.84	.99	.93
IFI	$\geq 0.95$	0.94 - 0.90	.89	.99	.95
TLI	$\geq 0.95$	0.94 - 0.90	.85	.99	.92
CFI	$\geq 0.97$	$\geq 0.95$	.89	.99	.95

# Table 1. Fit indices of the scales after CFA

Note: Fit indices (Meydan & Şeşen, 2011, p. 37).

As demonstrated in Table 1, the CFA values of the forgiveness, rumination, and psychological well-being scales that were utilized in the research meet the fit indices.

## **Data Collection and Analysis**

Before data collection, ethical permission with issue number E-73628654-604.01.01-39981 was obtained from Gaziantep University Social Sciences Ethics Committee. Then, the data collection tools were applied online to 360 sampled students studying in the teaching departments of Gaziantep University. After the outliers were determined from the obtained data, the researcher removed 28 forms from the research. SPSS 20.0 and AMOS 20.0 were utilized to analyze the data. For forgiveness, skewness coefficient value was -.322, and kurtosis coefficient value was .965. For rumination about interpersonal offense, skewness coefficient value was -.050, and kurtosis coefficient value was -.579. For psychological well-being, skewness coefficient value was -.901, and kurtosis coefficient value was 1.470. According to Büyüköztürk (2013), if the skewness and kurtosis

coefficient values are between +1.96 and -1.96, it may be considered that the data are normally distributed. For the analysis of the data collected through the personal information form, the frequencies (*N*), percentage (%) distributions, and descriptive and correlation coefficients of each variable measured by SPSS 20.0 were calculated. With the AMOS20.0 program, structural equation modeling was performed to analyze the direct effect of the rumination exogenous (external/independent) variable and the mediating effect of the forgiveness (moderator) variable on the psychological well-being endogenous (internal/dependent) variable.

#### FINDINGS

In the study, initially, the descriptive statistics and correlation coefficients of the variables were calculated, and then the relationships between the variables were examined with the structural equation model, and thus the model was tested. In Table 2, the arithmetic means of the perceptions of university students regarding forgiveness, rumination about interpersonal offense, and psychological well-being, and the correlation coefficients between these variables are presented.

Table 2. Means of university students' perceptions regarding forgiveness, rumination about interpersonal offense, and psychological well-being, and correlation coefficients between these variables

N	X	S. error	1	2	3
342	4.6140	.86	1	50**	.407**
342	3.4683	.90		1	198**
342	5.2760	.88			1
	342	342 3.4683	342         4.6140         .86           342         3.4683         .90	342         4.6140         .86         1           342         3.4683         .90	342         4.6140         .86         1        50**           342         3.4683         .90         1

\*\*p<.01

As can be seen in Table 2, the arithmetic means of the university students' perception levels of forgiveness was  $\overline{X}$ =4.6. The arithmetic mean of the rumination about interpersonal offense perception levels was  $\overline{X}$ =3.4, and the arithmetic mean of the perception levels for psychological well-being was  $\overline{X}$ =5.2. The results indicate that forgiveness and rumination about interpersonal offense have a negative, statistically significant, and moderate level relationship (r= -.50, p<0.1), and there is a moderate-level significant positive correlation between forgiveness and psychological well-being (r= .40, p<0.1). There is a significant negative relationship between rumination about interpersonal offense and psychological well-being (r= -.19, p<0.1) at a low level as indicated in Table 2. The coefficient values regarding levels (low, moderate, and high) are based on Büyüköztürk et al.'s (2012) study.

In the present study, the structural equation model was used to determine whether the rumination about interpersonal offense levels of university students had a significant effect on their psychological well-being. The SEM with the standardized path coefficients resulting from the analysis is demonstrated in **Figure 1**.

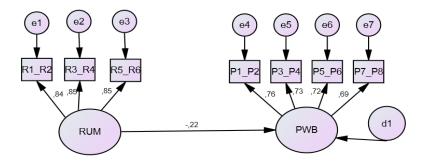


Figure 1. Standardized path coefficients for the effect of Rumination about Interpersonal Offense on Psychological Well-Being (RUM: Rumination about Interpersonal Offense, PWB: Psychological Well-Being)

As demonstrated in Figure 1, a negative and significant correlation (-.22) is detected between rumination about interpersonal offense and psychological well-being. The examination of fit values of the models ( $\chi^2$ = 43.729,  $\chi^2/df$ = 3.36, p= 0.00, Standardized RMR= .041, RMSEA= .083, GFI= .96, AGFI= .92, NFI= .95, IFI= .97, TLI= .95, CFI= .97) are at acceptable values or very close to acceptable values (Meydan & Şeşen, 2011).

According to the analysis results for the model created,  $\chi^2/df$  was found below 3.36. When it is acceptable for  $\chi^2/df$  to be less than 4-5, it can be stated that the  $\chi^2/df$  ratio fits the model. Since RMSEA and Standardized RMR values between 0.06-0.08 are considered acceptable fit, the values of the fit index in this study (Standardized RMR= .041, RMSEA= .083) can be regarded as acceptable (Meydan & Şeşen, 2011). As the absolute fit indices GFI and AGFI fit values of 0.90 or above will indicate a good fit, it can be stated that the values obtained from the analysis of this study (GFI = .94, AGFI = .90) have a good fit. The values of the comparative fit indices NFI, IFI, TLI of 0.95 and above indicate a good fit. Accordingly, the NFI, TLI, and CFI values in the results show a good fit. CFI values of 0.97 or above indicate acceptable fit. The model created in Figure 1 demonstrates that this value is 0.97 (Meydan & Şeşen, 2011). The standardized beta, standard error, and significance values for the paths specified in the model are presented in Table 3. According to the findings in this model, the perception of rumination has a significant effect on psychological well-being.

 Table 3. Coefficients of Model-1

Path	Standardβ	Standard Error	p
Rumination — Psychological well-being	-0.22	0.06	< 0.01

As shown in Table 3, rumination about interpersonal offense significantly affects psychological well-being (Standardized  $\beta = -0.22$ ; p < 0.01)

In the research, it was assumed by the theoretical model that forgiveness perceptions have a mediating effect on the correlation between rumination about interpersonal offense and psychological well-being perceptions of university students. Based on this assumption, forgiveness (intermediary variable) was added between rumination (independent variable) and psychological well-being (dependent variable) variables and analyzed with the SEM. The structural equation model with the standardized path coefficients resulting from the analysis is illustrated in **Figure 2**.

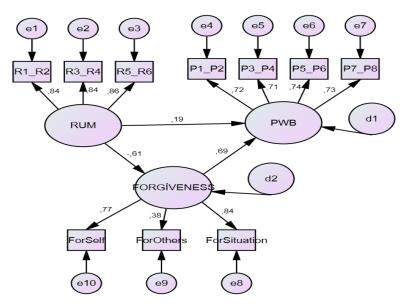


Figure 2. The structural equation model with standardized path coefficients of rumination about interpersonal offense, forgiveness, and psychological well-being (RUM: Rumination, PWB: Psychological Well-Being, FOR: Forgiveness, ForSelf: Forgiveness of Self, ForOthers: Forgiveness of Others, ForSitiuation: Forgiveness of Situations)

The results indicated that rumination significantly predicts (p=.00) psychological well-being (.19) in the positive direction and forgiveness (-.61) in the negative direction (Figure 2). On the other hand, forgiveness predicts psychological well-being (.69) positively and significantly (p=.00). The examination of the fit values of the model ( $\chi^2$ = 100.993,  $\chi^2/df$ = 3.56, p= 0.00, Standardized RMR= .062, RMSEA= .080, GFI= .94, AGFI= .90, NFI=.93, IFI= .95, TLI= .93, and CFI= .95) reveals that the values are acceptable or at very close levels to acceptable values.

According to the analysis results for the generated model,  $\chi 2/df$  was found below 3.56. When it is acceptable for  $\chi 2/df$  to be less than 4-5, it can be said that the  $\chi 2/df$  ratio is suitable for the model. Concerning the fact that values between 0.06-0.08 for RMSEA and Standardized RMR are considered acceptable fit, the values of this fit index (Standardized RMR= .062, RMSEA= .080) can be regarded as acceptable. Since values of 0.90 or above for absolute the fit indices GFI and AGFI will indicate a good fit, it can be stated that the values obtained from the analysis (GFI = .94, AGFI = .90) have a good fit. The values of comparative fit indices NFI, IFI, and TLI being 0.95 and above indicates a good fit, while their being in the range of 0.90-0.94 indicates an acceptable fit. Therefore, it was concluded that NFI and TLI had an acceptable fit, while CFI had a good fit. CFI values of 0.95 or above indicate acceptable fit. In the model created in Figure 2, it is seen that this value is 0.95 (Meydan & Şeşen, 2011). The standardized beta, standard error, and significance values for the paths specified in the model are given in Table 4.

#### Table 4. Path Coefficients of Model-2

Path	Standart β	Standart Error	р
Rumination — Psychological well-being	0.19	0.07	0.02
Forgiveness Sychological well-being	0.69	0.90	< 0.01
Rumination	-0.61	0.06	< 0.01

As presented in Model 2, the perception of rumination significantly affects forgiveness. In addition, forgiveness significantly affects psychological well-being. When forgiveness, which was not included in Model 1, was added to Model 2, the effect of perception of rumination (standardized  $\beta$ = 0.19; p < 0.01) on psychological well-being decreased. Accordingly, forgiveness has a partial mediating role in the effect of rumination about interpersonal offense on psychological well-being.

## DISCUSSION, CONCLUSION, AND RECOMMENDATIONS

This research aimed at examining the mediating role of forgiveness in the relationship between rumination about interpersonal offense and psychological well-being. Within the framework of this basic purpose, when the findings of the correlations between the variables are examined, rumination about interpersonal offense and psychological well-being seem to have a low significant negative correlation. This result is consistent with previous research. In a study conducted by Balzarotti et al. (2014) with participants aged 20-87 years, it was concluded that there is a negative relationship between rumination and psychological well-being. In Borawski's (2021) research with participants aged 19-40, it was reported that rumination and psychological well-being were negatively correlated. Likewise, in the study conducted by Hill and Watkins (2017), rumination was a negative and significant predictor of psychological well-being. In Li et al.'s (2022) study with 421 adolescents, a negative correlation between rumination and psychological well-being was determined. Accordingly, as individuals' ruminations about the offensive situations they perceive in their interpersonal relationships increase, their psychological well-being levels decrease.

The findings revealed a moderately significant negative relationship between rumination about interpersonal offense and forgiveness. The research in the literature is mainly on the relationships between continuous rumination and forgiveness. In Ysseldyk et al.'s (2007) study with participants aged 17-48 and by Suchday et al. (2006) with students aged 17-22, it was concluded that forgiveness and rumination are correlated negatively. Similarly, Bugay (2010) unearthed that when rumination increased, self-forgiveness decreased. When rumination studies related to specific situations are examined, Barber et al. (2005) concluded that there is a negative correlation between forgiveness and

rumination related to anger in a study with 200 university students. Oral and Arslan (2017) found that interpersonal offense and self-forgiveness and forgiveness of others are negatively correlated. It may be suggested that the result of the current study is consistent with the literature. Accordingly, as individuals' ruminations about the offensive situations they perceive in their interpersonal relationships increase, their level of forgiveness decreases.

A moderately significant positive relationship was detected between psychological well-being and forgiveness in this study. Consistently, Halisdemir (2013) concluded that self-forgiveness predicts psychological well-being significantly. According to the study conducted by Thompson et al. (2005), it was determined that forgiveness is a significant predictor of well-being. In the doctoral thesis study Avery (2008) conducted with university students, it was reported that forgiving oneself and others positively affects mental health. Likewise, Şahin (2013) found that there are significant positive relationships between forgiveness and psychological well-being levels in young adults. In another study, it was reported that the level of psychological well-being escalates as forgiveness increases (Koç et al., 2016). According to these results, as individuals' forgiveness levels increase, their psychological well-being level also improves.

Finally, mediation analysis was also performed within the framework of the study. First, a SEM was used to determine whether university students' levels of rumination about interpersonal offense affected psychological well-being significantly. As a result of the analysis, it was found that rumination about interpersonal offense significantly affected psychological well-being. As revealed in Model 2, rumination about interpersonal offense significantly affects forgiveness, and forgiveness significantly affects psychological well-being. With the inclusion of forgiveness, which was not in Model 1 but was included in Model 2, the effect of rumination about interpersonal offense on psychological well-being decreased. Accordingly, forgiveness has a partial mediating role in the effect of rumination about interpersonal offense on psychological well-being. When the prior research was examined, no study was found on the interaction of rumination about interpersonal offense, forgiveness, and psychological well-being. However, it is seen that the mediating role of rumination among various variables is examined. For instance, Borawski (2021) found that in a study of participants aged 19-40, there was a negative correlation between rumination and psychological wellbeing, and rumination was the mediating variable between loneliness and psychological well-being. In a study with 421 adolescents by Li et al. (2022), it was concluded that rumination is a partial mediator between cyber exclusion and psychological well-being. The results of the study conducted by Ysseldyk et al. (2007) with participants aged 17-48, it was determined that rumination is a partial mediator between forgiveness and psychological health (low depression, high life satisfaction). In their study conducted with university students, Yalçın and Malkoç (2013) concluded that forgiveness is one of the mediating variables between life meaning and subjective well-being. There are studies on the mediating effect of forgiveness. Suchday et al. (2006) reported in a study on students aged 17-22 that rumination is a mediating variable between forgiveness and perceived stress. The model established in this present research was formed based on the study conducted by McCullough et al. (2007). In their study, McCullough et al. (2007) revealed that the hypothesis that the increase in rumination precedes the decrease in forgiveness, which is one of the two hypotheses related to rumination and forgiveness, is more valid than the hypothesis that the increase in forgiveness comes before the decrease in rumination. In addition, Paleari et al. (2005) found that individuals become more forgiving as the rumination levels about offense decrease.

The results of the current study showed that as the level of rumination about the situations experienced in the interpersonal relationships of individuals increases, forgiveness decreases, reducing the psychological well-being of individuals. Thus, it is essential to enhance forgiveness in individual or group counseling and psycho-education activities to be carried out to increase psychological well-being. However, considering the effect of rumination on psychological well-being through forgiveness, it is important to conduct studies on rumination about interpersonal offense. Cognitive-behavioral therapies focus on the elements that affect emotions and behaviors, that is, the system of thought (Dattilio, 2012). According to cognitive-behavioral approaches, it is the ways of thinking that cause issues from mild communication conflicts to serious mental disorders from (Türküm, 2003). In

this context, it may be implied that studies should be carried out based on cognitive-behavioral approaches in which rumination about interpersonal offense and forgiveness are investigated together. In this manner, the psychological well-being levels of young adults, for whom interpersonal relationships are critical, may be increased. Individual and group counseling or psycho-education programs may be prepared based on cognitive-behavioral therapy. These counseling activities or programs should focus on context-specific rumination rather than general rumination and forgiveness and cognitions about forgiveness. Thus, it may be possible to decrease rumination and enhance forgiveness, which may positively affect psychological well-being. Enhancing forgiveness may serve as a protective factor for psychological well-being.

# LIMITATIONS

The online collection of the data due to the Covid-19 restrictions can be expressed as a limitation of the study. The sample was university students who studies in the teaching departments. Further research may be conducted on different samples from different departments at universities. In this research model, two variables affecting psychological well-being are discussed. In this respect, further contributions to the literature can be made by generating models with different variables that can influence psychological well-being or models with the sub-dimensions of forgiveness.

#### **Conflicts of Interest:**

No potential conflict of interest was declared by the authors.

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#### **CRediT** Author Statement:

Author 1 : Conceptualization and Methodology. Writing- Original draft preparation. Visualization, Investigation. Supervision. Validation. Writing- Reviewing and Editing.

#### **Ethical Statement:**

Ethical permission (05.05.2021- E-73628654-604.01.01-39981) was obtained from Gaziantep University's Social and Humanities Sciences Ethics Committee for this research.

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