
The predictive roles of positivity, forgiveness and religious attitudes on subjective happiness

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Abstract: The aim of this study was to determine the relationships among positivity, forgiveness, religious attitudes and subjective happiness on university students. The current study has been conducted in correlational design. The participants of the study consisted of 798 university students who were studying at different universities in Turkey. Participants completed the questionnaire packet including four different scales: subjective happiness scale (SHS), positivity scale (PS), forgiveness scale (FS) and Ok-religious attitude scale (ORAS). Pearson correlation analysis and hierarchical regression analysis were used to analyse the obtained data. The results indicated that positivity and forgiveness predicted subjective happiness significantly, and collectively accounted 22% of the variance of subjective happiness. However, according to the results, religious attitude did not significantly predict subjective happiness. The results obtained from the research were discussed in a light of related literature and several suggestions were made.

Keywords: subjective happiness; positivity; forgiveness; religious attitude; positive psychology; happiness; subjective well-being; psychological well-being; positive human strength; religiosity.

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1 Introduction

With the emergence of positive psychology, topics interested in the field of psychology began to change. A rapidly growing body of research has focused on human strengths rather than maladaptive constructs such as depression or anxiety (Keyes and Haidt,

2003). Seligman and Csikszentmihalyi (2000) noted that the field of positive psychology emphasises on the positive feelings of individuals such as subjective well-being, psychological well-being, happiness, life satisfaction, hope, optimism, and gratitude. Positive psychology is an approach that focuses on improving quality of life by making it possible to see positive aspects of life, helping people to use their potential, and teaching them how to enhance their positive feelings throughout their lives. For this reason, positive psychology investigates conditions and processes that contribute to happiness, human strength and the optimal functioning of people.

Subjective happiness, which is an important concept of positive psychology and a construct that characterises human mental health, has recently been a popular research topic (Cohen, 2002). Subjective happiness can be defined as a subjective assessment of whether a person is happy or unhappy (Lyubomirsky, 2001). Almost everyone wants to be happy in life, but individuals who are high in subjective happiness have more positive thoughts about themselves, see the world as supportive, consistently exhibit stronger or more intense emotional reactions to positive experiences and react more quickly to adverse events (Boehm and Lyubomirsky, 2009; Lee and Im, 2007; Seidlitz et al., 1997). While determining the criteria of happiness in studies related to happiness, Diener et al. (2000) discovered that happy people often feel positive and experience positive situations intensely. In various studies, subjective happiness has been found to have a strong positive correlation with life satisfaction (Nemati and Maralan, 2016) and self-esteem (Furnham and Cheng, 2000). On the other hand, researchers found that happiness was negatively correlated with depressive symptoms (Chaplin, 2006) and stress (Schiffirin and Nelson, 2010). There are also studies that cover the positive impact of well-being and happiness on mental and physical health (Lyubomirsky et al., 2005; Steptoe et al., 2009). In other studies, it was seen that socioeconomic variables such as economic power (Juster and Stafford, 1985), income (Takashi and Kobayashi, 2011), gender, educational status (Bülbül and Giray, 2011); academic and vocational variables including performance and career (Lyubomirsky et al., 2005); and social variables like friendship quality (Akin and Akin, 2015), marital attitudes and respect toward partner (Uğur, 2016; Uğur et al., 2019) have an influence on well-being. Several researches have been conducted to explore and compare the determinants of the well-being of those who grow up in an individualistic society and who grow up in a collectivist society. While individuals who grow up in an individualistic society see well-being as their own success, individuals who grow up in a collectivistic society see well-being as a result of positive social relations and social harmony (Uchida et al., 2004). Lama and Cutler (2011) suggested that the purpose of life is to seek happiness and underlined that, contrary to common belief, the determinants of well-being are not external factors. For this reason, in recent years, studies have focused more directly on internal factors and positive personal traits that influence and enhance an individual's well-being.

It is inevitable to consider that subjective happiness is influenced by several concepts that have been widely studied in positive psychology. One of them is positivity, which is defined as “a positive view of one's self, one's life, and one's future, as well as one's confidence in others” (Caprara et al., 2012). Positivity was named as positive thinking (Caprara and Steca, 2005; Caprara et al., 2006), positive orientation (Alessandri et al., 2012; Caprara et al., 2010), and positive evaluation (Caprara et al., 2013) in different studies. Caprara et al. (2009) noted that positivity involves certain basic components of personal characteristics such as self-confidence, life satisfaction, and optimism. In addition, when looking at the studies examining the relationship between personality

traits and well-being, extraversion has a positive relationship with subjective well-being, neuroticism has a negative relationship with subjective well-being (Pollock et al., 2016; Steel et al., 2008; Tkach and Lyubomirsky, 2006) and it is understood that the general positivity is a mediator of the relation between personality (neuroticism) and subjective happiness (Lauriola and Iani, 2017). In addition, Lyubomirsky (2001) noted that positivity is related to the development of happiness. Positivity is to make positive evaluations about past experiences and future; is a tendency to evaluate aspects of life as positive in general (Diener et al., 2000; Fagnani et al., 2014; Kozma et al., 2000). In several studies conducted with cancer patients, researchers have examined the impact of positivity and even indicated that positive thinking may be part of cancer treatment (Ochoa et al., 2017; Wilkes et al., 2003). Macleod and Moore (2000) have revealed the importance of positive cognition in healing and relapse in psychological disorders, especially depression. Nikmanesh and Zandvakili (2015) stated in their study with adolescents in the Correction and Rehabilitation Center in Zahedan that individuals, who developed their positive thoughts and positive experiences, had less depression and anxiety. Kim (2017), who studied with nursing students in South Korea; and Lauriola and Iani (2017), who studied with Italian adults (between the ages of 20 and 60), concluded that positivity and happiness are highly correlated. Boyacı (2019), Adam-Karpuz and Sarıçam (2018) and Mert (2019), who have researched on the Turkish community, found that there is a positive and strong relationship between positivity and happiness. Based on the previous definitions or explanations, it can be said that if individuals have a positive point of view towards their life, they will judge their life as happy.

Another important concept which may have an impact on subjective happiness is forgiveness. Forgiveness, which has three sub-dimensions as forgiving oneself, forgiving others and forgiving the situation, is the conceptualisation of the process of prosocial change, which begins with establishing empathy toward a transgressor or hurtful actions (McCullough et al., 2003; Thompson et al., 2005). In this process, the individual tries to develop positive emotions such as love, sensitivity, generosity, and compassion, instead of developing negative emotions such as anger and revenge for the offender who has hurt or wronged his/her unfairly (Enright and Fitzgibbons, 2000; Reed and Enright, 2006). So, forgiveness is a healthy attempt to deal with the painful memory of the event, getting away from the thoughts of anger and revenge (Maltby et al., 2001). Furthermore, studies show that forgiving other people increase the individual's psychological well-being (Bono et al., 2008; Krause and Ellison, 2003) and individuals who cannot forgive others have high depressive symptoms (Maltby et al., 2001). Both theoretical and empirical studies (Krause and Ellison, 2003; Lawler-Row and Piferi, 2006; McCullough, 2000; Thoresen et al., 2000; Toussaint and Webb, 2005); as well as both experimental and intervention studies (Karremans et al., 2003; Worthington et al., 2007) showed that forgiveness enhances psychological well-being. The desire to improve harmony with the people they live with can increase the forgiveness of individualistic persons who care about their personal choices, as well as collectivistic persons acting on social norms (Sandage et al., 2003). A study conducted by Ysseldyk et al. (2007) with university students, mostly from European-Caucasus, found that the high level of forgiveness and less hatred are associated to psychological well-being. In the study with UK students by Maltby et al. (2005), it is observed that there is a relationship between every sub-dimension of forgiveness (negative affect, negative judgement, negative behaviour, positive affect, positive judgement and positive behaviour) and happiness. In studies conducted with Turkish university students, forgiveness appears to have an important

effect on subjective well-being and happiness (Adam-Karpuz and Sariçam, 2018; Uysal and Satıcı, 2014; Zümbül, 2019). In light of all these, forgiveness as a positive human strength helps individuals to experience more psychological relaxation.

Another important predictor variable that may influence subjective happiness is the religious attitude. When viewed in the literature, religiosity is frequently defined as involving mental acts such as religious beliefs or attitudes, behavioural actions such as continuity or participation in religious services, and personal acts such as praying (Dezutter et al., 2006; Maltby et al., 1999; Poloma and Pendleton, 1990). Religious attitude is the way an individual thinks, feels, and behaves about religion (Peker, 2008). As it is understood from the definitions, although religious attitudes seem to be a sub-dimension of religiosity, they have an influence which directs the religious life and religious behaviour of the person. It is even stated that religious attitudes have an influence on other aspects of life which are not related to religion (Kaya, 1998). Researches on religion, in particular, revealed that there is a positive relationship between religiosity and mental health (Bekke-Hansen et al., 2014; Bonelli and Koenig, 2013; Hackney and Sanders, 2003; Luyten et al., 1998). In these studies, spirituality, religion and religious coping are seen as effective strategies to cope with the annoying problems. It seems that religion has an impact on one's mental health in various ways. For instance, participation in religious organisations has been linked to social support by giving a sense of belonging. In addition, religion allows people to make sense of events and reinterpret them.

Contradictory results are obtained when looking at the studies that examine the relationship between religion and happiness. In three different studies conducted with various samples, it was concluded that subjective happiness and religion do not have a relationship: a sample of two British religious groups (Anglican priests and members of the Anglican Church) (Lewis et al., 2000); a sample of university students in Germany (Francis et al., 2003); a sample of adults between the ages of 18 and 73 in Australia (Sillick et al., 2016). However, in some studies conducted on different sample groups, it was found that religiousness/religious attitude contributed to increasing the level of happiness (Abdel-Khalek, 2011; Aghababaei, 2014; Aghababaei and Błachnio, 2014; Bixter, 2015; Diener et al., 2011; Francis et al., 2003; Francis and Lester, 1997; French and Joseph, 1999; Soydemir et al., 2004; Witter et al., 1985; Wnuk and Marcinkowski, 2014). In addition, according to World values surveys in the Netherlands, Denmark and the United States, the effects of religion on happiness are not the same everywhere and these effects are not always positive (Snoep, 2008). Some studies that examine the relationship between the sub-dimensions of religious orientation and happiness also show different results. In the study of Aghababaei (2014), conducted with Iranian university students, was found that subjective happiness is associated with intrinsic orientation towards religion and extrinsic-personal orientation towards religion; however, not with extrinsic-social orientation towards religion. In the study conducted by Aghababaei and Błachnio (2014) with university students from Christian Polish was found that happiness is associated with intrinsic orientation towards religion; however, is not associated with extrinsic-social and extrinsic -personal orientation towards religion. Studies on the adult Turkish samples (Balçı, 2011; Balçı-Arvas, 2017; Göcen, 2013) reveal that religion has a significant relationship with happiness. The study, conducted by Beyaz and Kaldık (2018) on university students, found that approximately 12% of the happiness scale variance was explained by the religiosity scale, which includes thought-related processes, attitudes and behavioural patterns related to religion. Different studies that examine the

effect of religion on happiness have not consistent results. However, studies in Turkey show that religion has a positive impact on happiness.

According to the researches, the social structure and the culture that feeds it are effective in determining the factors affecting subjective happiness (Diener et al., 2000). In a study conducted in Turkey, it is concluded that age, gender, education and marital status are important determinants of subjective well-being (Kangal, 2013). In addition to these demographic characteristics, Turkish studies in recent years have been showing that the personality traits and, in particular, the human strength characteristics in the context of positive psychology are also effective on happiness (Sarı and Yıldırım, 2017; Tayfun, 2013). On the whole, these positive individual characteristics have an important role in increasing happiness in the living conditions of Turkish individuals. Although it is not possible to generalise the findings completely due to cultural differences in Turkish society, it is thought that studies with culture-specific and specific groups will contribute significantly to the field. The University period is a period in which students from different socio-cultural environments come together and experience economic and social-emotional changes individually (Gürkan and Gür, 2019). Accordingly, it is estimated that positive personality traits will increase the happiness levels of Turkish university students despite changing living conditions.

In this study, some variables which have limited number of studies in literature to explain subjective happiness and their relationship with subjective happiness are discussed. A distinctive characteristic of our study is to examine together the concepts of positive psychology which are thought to affect the subjective happiness variable and to determine its contribution in explaining subjective happiness. In this context, it is worthwhile to research on how effective “positivity, forgiveness and religious attitude variables”, which are strong variables of positive psychology, on subjective happiness of university students. This study is expected to contribute to the field of positive psychology in line with the insights draw from scholarly literature. This research was aimed to investigate the predictive role of positivity, forgiveness and religious attitude on subjective happiness in a sample of university students in Turkey. Therefore, it is thought to this study will contribute to the explanation of happiness. It is believed that studies on the positive components of human behaviours contribute to the mental health of individuals by determining the variables that can affect individuals’ subjective happiness levels.

2 Method

2.1 Participants

This study was carried out with 798 university students who were enrolled in four different universities: Uludag University ($n = 202$, 25.3%), Ankara University ($n = 191$, 23.9%), Yıldız Technical University ($n = 198$, 24.8%) and Ondokuz Mayıs University ($n = 207$, 25.9%) in Turkey. Due to the limited time and financial sources, a convenience sampling method was adopted and participants were selected from different faculties of universities. The ages of the participants were between 17 and 45 years. The average age of the study group was 20.97. Participants were 450 (56.2%) female, 348 (43.6%) male

undergraduate students. Of these students, 121 (15.2%) were first-year students, 259 (32.5%) were second-year students, 205 (25.7%) were third-year students, and 213 (25.7%) were fourth-year students.

2.2 Measurements

The subjective happiness scale (SHS). The SHS was developed by Lyubomirsky and Lepper (1999), to measure the perceived happiness of individuals. The SHS consists of four items and rated on a seven-point Likert scale. SHS is a summative measurement tool and one item (4) was reverse coded when calculating total sum score. Scores range from 4 to 28 with higher scores pointing higher perceived subjective happiness. The SHS has been adapted to Turkish language by Akın and Satici (2011). Exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) was conducted to test the structure validity. Results of EFA indicated that the 4 items loaded on one factor with 46% of the total variance explained, as in the original form. Fit index values obtained from the CFA were also at an acceptable level ($\chi^2/df = 0.71$, $p < 0.05$, RMSEA = 0.000, NFI = 0.99, CFI = 1.00, IFI = 1.00, RFI = 0.98, GFI = 1.00, AGFI = 0.99 ve SRMR = 0.015). The Cronbach's alpha reliability coefficient of the SHS was found 0.86. In addition, the test-re-test correlation was found 0.73.

The positivity scale (PS). The PS was developed by Caprara et al. (2012) to measure individuals' positivity levels. The scale consists of eight items and uses a Likert scale ranging from 1 to 5 with one item reverse-coded. Scores range from 8 to 40 with higher scores pointing better positive orientation. The PS was adapted to Turkish language by Çikrikçi et al. (2015). The Cronbach's alpha reliability coefficient of the Turkish form of PS was calculated as 0.73. The results of confirmatory factor analysis showed that the model was well fit ($\chi^2_{(17)} = 49.75$, $p < 0.001$; $\chi^2/sd = 2.92$; RMSEA = 0.06; CFI = 0.95; IFI = 0.95; GFI = 0.97; AGFI = 0.94; NFI = 0.92; NNFI = 0.92; SRMR = 0.04; RFI = 0.88).

Forgiveness scale (FS). FS was developed by Ersanlı and Vural-Batık (2015) with the aim to measure two dimensions of forgiveness: (a) forgiveness of self (b) forgiveness of others. The FS consists of 13 items. The scale uses a Likert scale ranging from 1 to 7 with six items (items 1, 2, 3, 6, 7 and 8) reverse-coded. Scores range from 13 to 91 with higher scores pointing better forgiveness level. Results of exploratory factor analysis demonstrated that the 13 items loaded on two factors. These factors explained 46.09% of total variance. The Cronbach's alpha reliability coefficient were 0.82, 0.76, and 0.74 for forgiveness of self, forgiveness of others, and FS overall, respectively. Confirmatory factor analysis showed that the 2-factor model had an acceptable fit to the data ($\chi^2/sd = 1.95$, $p < 0.001$, RMSEA = 0.07, CFI = 0.91, GFI = 0.91, AGFI = 0.87, NNFI = 0.89, SRMR = 0.06).

Ok-religious attitude scale (ORAS). The ORAS was developed by Ok (2011) to measure religious attitudes of university students. The ORAS contains 8 items with scores ranging from 1 to 5, and total scores ranging from 8 to 40. Higher scores represent higher religiousness. The ORAS is composed of four subscales confirmed by explanatory factor analysis (cognitive, emotional, behavioural and relational). The four-factor model explained 78% of the total variance. The Cronbach's alpha reliability coefficient of the

ORAS was found 0.90. Confirmatory factor analysis results showed that, the model was well fit ($\chi^2 = 55.56$, $sd = 16$, $p < 0.01$, RMSEA = 0.08, CFI = 0.99, SRMR = 0.04).

2.3 Procedure and data analysis

Researchers conducted the data collection for the current research upon obtaining required permissions on the subjects. Volunteering students participated in the research. The data collection tools and the Personal Information Form were administered to the participants by the researchers. The data collection tools were administered to the students in groups. All participants were informed about the process of the study and the instructions on how to respond to the items were provided. The scales were always given in the same order to individuals. They completed the questionnaire packet in their regular class hours. Scale application took approximately 30–35 min.

Pearson's correlation analysis and hierarchical regression analysis were used to analyse the data. Heteroskedasticity-Robust Tests was used to identify outliers and minimise their impact on the coefficient estimates. The significance level was set to 0.05. Analyses were carried out via IBM SPSS Statistics 22.0.

3 Results

3.1 Descriptive statistics and inter-correlations

The correlational associations among subjective happiness, positivity, forgiveness, and religious attitude are presented in Table 1, as well as, the basic descriptive statistics for all study variables of interest and skewness-kurtosis coefficients. The results of Pearson correlation analysis indicated that subjective happiness was positively correlated with positivity ($r = 0.46$), forgiveness ($r = 0.19$), and religious attitude ($r = 0.19$). Positivity was also associated with forgiveness ($r = 0.13$), and religious attitude ($r = 0.28$). Besides, there was a positive correlation between forgiveness and religious attitude ($r = 0.14$).

Table 1 Descriptive Statistics for and Correlations among Study Variables

| Variables | 1 | 2 | 3 | 4 |
|-------------------------|--------|--------|--------|-------|
| 1. Subjective happiness | – | | | |
| 2. Positivity | 0.46** | – | | |
| 3. Forgiveness | 0.19** | 0.13** | – | |
| 4. Religious attitude | 0.19** | 0.28** | 0.14** | – |
| <i>M</i> | 19.33 | 30.48 | 54.32 | 34.10 |
| <i>SD</i> | 4.37 | 4.78 | 12.26 | 5.67 |
| Skewness | –0.36 | –0.82 | 0.06 | –1.33 |
| Kurtosis | 0.39 | 0.99 | 0.16 | 1.44 |
| Cronbach's alphas | 0.70 | 0.72 | 0.75 | 0.91 |

** $p < 0.01$.

3.2 Results of multiple regression analysis

Skewness and kurtosis coefficients were computed to examine whether the variables exhibit normal distribution or not. If the skewness and kurtosis coefficients are between ± 1.50 , it can be said that the variables are distributed normally (Tabachnick and Fidell, 2007). As shown in Table 1, subjective happiness, positivity, forgiveness, and religious attitude scores exhibited a normal distribution. Graphs of standard error values were examined to see if the data showed normal distribution. In regression analysis, Mahalanobis distance values were used to determine whether there are excessive values that make it difficult to compare linearity and normality (multivariate) assumptions. If the calculated Mahalanobis value is smaller than the value of the χ^2 table, it can be assumed that the assumption of multivariate normality is satisfied (Büyüköztürk, 2012). Twenty-four data were extracted from the dataset which had a greater Mahalanobis value (11,345). Then, it was checked whether there is a multicollinearity problem or not. Multicollinearity means a high correlation between the variables which are entered into the regression analysis. If the highly correlated independent variables are entered regression analysis, the model will be sensitive to the extraction or addition of independent variables or observations from analysis and there will be significant changes in the parameters (Büyüköztürk, 2012). To examine the existence of such a problem, the relationships among the independent variables were tested. As shown in Table 1, it is found that the correlation coefficients among variables are below 0.80. In order to detect multicollinearity, the variance inflation factor (VIF) was also calculated. There were no incidents where the VIF is over 5 which would have indicated that multicollinearity is very likely a problem. Therefore, and in the direction of these findings, it is thought that the assumptions necessary for regression analysis are met.

Before starting the regression analysis, when we look at the age range of university students in the sample, it is seen that the sample has an age range of 18 to 46 years. As high age differences were observed among university students, a robustness test was needed for the reliability of the study findings. Heteroskedasticity SPSS syntax by Ahmad Daryanto is used (Daryanto, 2013) for this purpose.

Firstly, outliers in the age variable were identified by the Box-Plot diagram and they were removed. The model was rerun without these outliers ($R^2 = 22$, $F_{(5,773)} = 43,564$, $p > 0.00$). In Table 2, the regression coefficients are compared how much it moves between the original model and the model without outliers. Based on the results of the Heteroskedasticity-Robust Tests and original OLS results in Table 2, it can be seen that the coefficients and standard errors are quite similar, and the t values and p values are quite similar. In this analyse, using robust standard errors did not change any of the conclusions from the original OLS regression. Despite the minor problems that we found in the data when we performed the OLS analysis, the Heteroskedasticity-Robust Tests yielded quite similar results suggesting that indeed these were minor problems. All three models have reasonably stable regression coefficients. We can say that we have a well specified model and regression coefficients are not affected by outliers.

Finally, a hierarchical regression analysis was conducted to test the effects of the control variables and examine the predictive roles of positivity, forgiveness, and religious attitude on university students' subjective happiness level. In the first step of the regression, control variables were entered (age, gender). In the second step positivity, forgiveness, and religious attitude were entered. The results of multiple regression analysis are summarised in Table 3.

Table 2 Regression coefficients of the original model OLS outputs, the model without outliers, OLS outputs with heteroscedasticity-robust standard errors

| <i>Variables</i> | <i>B</i> | <i>SE</i> | <i>T</i> | <i>P</i> | <i>95%LB</i> | <i>95%UB</i> |
|---|----------|-----------|----------|----------|--------------|--------------|
| <i>Model without outliers</i> | | | | | | |
| Constant | 5.056 | 2.186 | 2.313 | 0.021 | 0.765 | 9.347 |
| Age | -0.012 | 0.089 | -0.137 | 0.891 | -0.186 | 0.162 |
| Gender (dummy) | -0.345 | 0.271 | -1.274 | 0.203 | -0.877 | 0.187 |
| Positivity | 0.362 | 0.029 | 12.501 | 0.000 | 0.305 | 0.419 |
| Forgiveness | 0.041 | 0.011 | 3.693 | 0.000 | 0.019 | 0.063 |
| Religious At. | 0.042 | 0.025 | 1.676 | 0.094 | -0.007 | 0.090 |
| <i>Original Model- OLS outputs</i> | | | | | | |
| Constant | 5.857 | 1.677 | 3.493 | 0.001 | 2.571 | 9.144 |
| Age | -0.070 | 0.059 | -1.190 | 0.234 | -0.186 | 0.045 |
| Gender (dummy) | 0.283 | 0.269 | 1.054 | 0.292 | -0.244 | 0.810 |
| Positivity | 0.366 | 0.029 | 12.662 | 0.000 | 0.309 | 0.422 |
| Forgiveness | 0.045 | 0.011 | 4.166 | 0.000 | 0.024 | 0.067 |
| Religious At. | 0.034 | 0.025 | 1.372 | 0.170 | -0.014 | 0.082 |
| <i>OLS outputs with heteroedasticity-robust standard errors (HC3 variant)</i> | | | | | | |
| Constant | 5.857 | 1.697 | 3.451 | 0.001 | 2.571 | 9.144 |
| Age | -0.070 | 0.056 | -1.263 | 0.207 | -0.186 | 0.045 |
| Gender (dummy) | 0.283 | 0.275 | 1.032 | 0.303 | -0.244 | 0.810 |
| Positivity | 0.366 | 0.032 | 11.366 | 0.000 | 0.309 | 0.422 |
| Forgiveness | 0.045 | 0.011 | 3.989 | 0.000 | 0.024 | 0.067 |
| Religious At. | 0.034 | 0.027 | 1.246 | 0.213 | -0.014 | 0.082 |

Table 3 Summary of the hierarchical regression analysis results for variables predicting subjective happiness

| <i>Variables</i> | <i>B</i> | <i>SE of B</i> | β | <i>t</i> | <i>p</i> |
|------------------|----------|----------------|---------|----------|----------|
| <i>Step 1</i> | | | | | |
| Constant | 20.32 | 1.43 | | 14.18 | 0.00 |
| Age | -0.06 | 0.07 | -0.03 | -0.87 | 0.39 |
| Gender (dummy) | 0.35 | 0.30 | 0.04 | 1.17 | 0.24 |
| <i>Step 2</i> | | | | | |
| Constant | 5.86 | 1.68 | | 3.50 | 0.001 |
| Age | -0.07 | 0.06 | -0.04 | -1.19 | 0.23 |
| Gender (dummy) | 0.28 | 0.27 | 0.03 | -1.05 | 0.30 |
| Positivity | 0.40 | 0.03 | 0.42 | 12.66 | 0.000* |
| Forgiveness | 0.04 | 0.01 | 0.13 | 4.17 | 0.000* |
| Religious At. | 0.03 | 0.02 | 0.04 | 1.37 | 0.17 |

* $p < 0.001$.

The hierarchical regression analysis was conducted with subjective happiness as dependent variable and the analysis was completed in two steps. The effect of age and gender was controlled and was removed from the predictive relationship of positivity, forgiveness and religious attitude to subjective happiness. At step 1 of the analysis, control variables entered (age, gender) into the regression equation and accounted for 3 % of the variance in subjective happiness ($R^2 = 0.03$, $F_{(2, 795)} = 1, 18$, $p = 0.306$). When the relevant values are analysed, it is seen that gender and age variables are not significant predictors for subjective happiness ($p = 0.915$). In step 2, positivity, forgiveness and religious attitude were added to the model with the 'enter method' together. Gender, age, positivity, forgiveness and religious attitude together accounted for 22 % of the variance in subjective happiness ($R = 0.47$, $R^2 = 0.22$, $Adj. R^2 = 22$, $F_{(3,792)} = 44, 99$, $p < 0.001$). When the results of the t test which indicate the relative importance of the regression coefficients were examined, it was seen that the positivity and forgiveness have more effect on the subjective happiness. These results also indicated that positivity was the strongest predictor of subjective well-being compared to other independent variables.

The results of the analysis indicated that positivity ($\beta = 0.42$) and forgiveness ($\beta = 0.13$) are the significant predictors of subjective well-being. Contrary to our expectations, religious attitude ($\beta = 0.04$) is not a significant predictor of subjective happiness. However, it has been found that age ($\beta = -0.04$) and gender ($\beta = 0.03$) as control variables are not significant predictors of subjective happiness. The control variables did not differentiate well in predicting subjective happiness, and thus did not improve model fit. In sum, the model explained 22% of the variance in subjective happiness.

4 Discussion

In this study, it was aimed to investigate the predictive roles of positivity, forgiveness and religious attitude on subjective happiness. The results showed that positivity and forgiveness are significant predictors of subjective happiness; however, the religious attitude was not a significant predictor of subjective happiness.

The findings of the current study are consistent with the study of Lauriola and Iani (2017) and Kim (2017), who concluded that positivity, is an important predictor of subjective happiness. In these studies, a positive and high level of correlation value ($r = 0.67, 0.66$, respectively) was obtained between positivity and subjective happiness. In the current study, a positive and moderate correlation ($r = 0.46$, $p < 0.01$) was obtained between positivity and subjective happiness. When the findings of the research with the Turkish University students are analysed, it is seen that there are similar results. In the study conducted by Mert (2019), it was found that there was a correlation between positive perception consisting of three dimensions (self-perception, time-related and human nature) and subjective happiness, and that positive perception explained about 33% of the total variance related to subjective happiness. In the study of Boyacı (2019) and Adam-Karpuz and Sarıçam (2018), it is seen that the participants' positivity and happiness scores have a positive and high level of significant correlation ($r = 0.74, 0.61$, respectively). All studies conducted in different countries and with different age groups show that positivity is very closely related to the development of the happiness of the individual under all conditions. Lyubomirsky (2001) suggests that positive individuals may be happier by experiencing more positive thoughts and more positive experiences.

Diener et al. (1998) indicates that individuals with high subjective happiness have more positive thoughts about themselves and view subjective happiness as a contributing factor in their lives. Indeed, positivity, which is also effective in reducing depression and anxiety (Nikmanesh and Zandvakili, 2015), proves to be an effective positive human strength to protect the mental health of university students in changing living conditions.

The results of the present study show consistently with the literature that forgiveness also predicts subjective happiness. In the longitudinal study conducted by Bono et al. (2008), has been concluded that increased forgiveness provides increased psychological well-being. In addition, there are many studies in the literature that prove a positive relationship between forgiveness and subjective happiness (Karremans et al., 2003; Krause and Ellison, 2003; Lawler-Row and Piferi, 2006; McCullough, 2000; Thoresen et al., 2000; Toussaint and Webb, 2005; Worthington et al., 2007). Adam-Karpuz and Sarıçam (2018) and Zümbül (2019), who studied on Turkish university students, obtained moderate positive correlation ($r = 0.58$, 0.56 , respectively) between forgiveness and happiness/psychological well-being. In the current study, a positive and weak correlation ($r = 0.19$, $p < 0.01$) was obtained between positivity and subjective happiness. Maltby et al. (2005), obtained different correlation values ranging from 0.26 –0.35 in their study which he examined the relationship between happiness and 6 dimensions of forgiveness on the UK students' sample. In addition, Lawler-Row and Piferi (2006) found a positive correlation between forgiveness and subjective well-being ($r = 0.22$). Ysseldyk et al. (2007) found a negative and weak level relationship between forgiveness and depressive affect ($r = -0.22$). It is thought that the different correlation values related to the relationship between forgiveness and subjective happiness may result from the different scales used. As a result, forgiving individuals are away from negative emotions and develop positive emotions within themselves (Enright and Fitzgibbons, 2000; Reed and Enright, 2006; McCullough et al., 2003). Individuals who are not successful in forgiving report more depressive symptoms (Maltby et al., 2001). As can be understood from the studies conducted on different sample groups, the importance of forgiveness as a positive personal trait in positive psychology and the role of forgiveness in the individual's happiness are high. Therefore, it is possible to say similar things for university students who have intensive interpersonal relations.

The other finding of the current study was that there was a low positive association between religious attitude and subjective happiness and the religious attitude was not a significant predictor of subjective happiness. This result is inconsistent with studies which have reported significant positive correlations among religiosity, religious attitude and subjective well-being (Abdel-Khalek, 2011; Aghababaei, 2014; Aghababaei and Błachnio, 2014; Bixter, 2015; Diener et al., 2011; Francis and Lester, 1997; Soydemir et al., 2004; Wnuk and Marcinkowski, 2014). This is also inconsistent with the study by Wani and Khan (2015) who found that religion is a predictor of subjective well-being. However, some previous studies reported contradictory results on the relationship between religious attitude and subjective happiness, with a number of studies supporting the findings of the present study. In studies conducted by Francis et al. (2003), French and Joseph (1999), and Snoep (2008), it was found that there is a positive, but low correlation between religious attitude and subjective happiness. Similarly, in two meta-analysis studies, Argyle (2001) and Hackney and Sanders (2003) pointed out that the correlation between religiosity and happiness was low. Besides, in studies conducted by Francis et al. (2003), Lewis et al. (2000) and Sillick et al. (2016) no association was found between happiness and religious attitude. There are several reasons for these

contradictory results including the different definitions of religiosity and religious attitude in the literature, the effect of using different measurement tools and the characteristics of sample groups. For instance, McFadden (2005) and Okun and Stock (1987) found that there is a significant correlation between well-being and religiosity, especially in older people and religion is a substantial predictor of the well-being of elderly people. Despite the fact that some age groups are more concerned with religion, the primary needs and interest of university students may be exams, having a good career and earning money, thus, they may not concern with religion. Kashdan (2004) noted that selecting measurement tool is essential to measure the subjective well-being level. In addition, George et al. (2000) and Witter et al. (1985) demonstrated that religious behaviour is a stronger predictor of subjective well-being as compared to religious attitude. These findings may be another reason why our results differ from other research findings that use scales which include items related to participating in religious behaviour. As can be seen from these explanations, the finding of the current study, which indicated that religious attitude is not a significant predictor of subjective well-being, is consistent with the findings of many studies despite the contradictory results in the literature.

Another important finding of this study is that there is a low positive relationship between religious attitude and subjective happiness, and religious attitude is not a significant predictor of subjective happiness. This result is inconsistent with the study of Wani and Khan (2015), who found religion to be an indicator of subjective well-being. This result also contrasts with the study that Beyaz and Kaldık (2018) who found that religiousness (which includes religious intellectual processes, attitudes, and behavioural patterns) predicted the happiness of Turkish university students. In the current study, a positive and low-level correlation ($r = 0.19$, $p < 0.01$) was obtained between religious attitude and subjective happiness. Previous studies have reported conflicting results about the relationship between religious attitude and subjective happiness. It is seen that there is a positive and moderate relationship between happiness and religiosity in the following 3 studies ($r = 0.28$, 0.25 , 0.26 , respectively): The study on the level of happiness and religious attitude of university students in US (Francis and Lester, 1997); the study on the religiosity and happiness levels of university students in Egypt (Abdel-Khalek, 2011); the study on the psychological well-being and religious orientation levels of adults in Turkey (Göcen, 2013). In these studies, it is understood that close results have been obtained despite studying with different ethnic origin and the use of different dimensions of religion. However, supporting our findings, Francis et al. (2003), French and Joseph (1999) and Snoep (2008) found a positive, but low correlation between religious attitude and subjective happiness in their studies. In a study conducted by Balcı (2011) in Turkey, positive and significant correlation was found between adults' belief in the hereafter and their subjective well-being ($r = 0.12$, $p < 0, 5$). Similarly, in two meta-analysis studies, Argyle (2001) and Hackney and Sanders (2003) pointed out that the correlation between religiosity and happiness was low. There are several reasons for these contradictory results including the different definitions of religiosity and religious attitude in the literature, the using of different measurement tools and the characteristics of sample groups. For instance, McFadden (2005) and Okun and Stock (1987) found that there is a significant correlation between well-being and religiosity, and also that religion is an important predictor of the well-being of elderly people. Also, in the study of Aghababaei (2014) on Iranian students and in the study of Aghababaei and Błachnio (2014) on Christian Polish university students concluded that intrinsic orientation towards religion ($r = 0.16$, 0.21 , respectively) are correlated with happiness. However, in these studies

extrinsic-personal orientation towards religion is not correlated with happiness. Despite the fact that some age groups are more concerned with religion, the primary needs and interest of university students may be different. Because of needs such as exams, having a good career and earning money, they may not concern with religion. It is understood that the secondary benefit of religion as a social gain does not take much place (extrinsic-personal orientation to religion) in the life of university students, but there is a relationship between the motivations to experience their religious belief internally (intrinsic orientation) and happiness.

On the other hand, Kashdan (2004) noted that selecting measurement tool is essential to measure the subjective well-being level. In addition, George et al. (2000) and Witter et al. (1985) demonstrated that participation in religious behaviour is a stronger predictor of subjective well-being as compared to religious attitude. These findings may indicate another reason why our results differ from other research findings that use scales containing items related to participation in religious behaviour. According to the finding of the current study, although there is a positive and significant correlation between religious attitude and happiness, religious attitude does not explain subjective happiness significantly in the sample of Turkish university students. As was previously stated, the concepts of happiness and religion are multidimensional. Therefore, in order to get more detailed information about the relationship between religion and happiness, it is necessary to conduct more specific researches with scales covering different sub-dimensions of both variables.

Overall, these findings indicated that positivity and forgiveness are significant predictors of subjective happiness in a Turkish sample. It is necessary to mention some limitations of this study. Firstly, the sample of the current study is limited to university students, so it is necessary to be careful to generalise the findings to other sample groups. Secondly, the data in the present study were collected through self-reported data which may cause single-source bias. As the third limitation, we should state that cross-sectional data is used in this study. The cross-sectional study involves looking at data from a population at one specific point in time and generally does not allow the testing of causal relationships. Despite these limitations, it is thought that the results of this study will provide new perspectives in understanding the relationships among subjective happiness, positivity, forgiveness and religious attitude.

As a result, positivity and forgiveness were able to account for 20% of the variance in subjective happiness. Given that this result is relatively low, it can be argued that more research is needed to obtain more decisive results in order to give suggestions for future research. Additional studies may be necessary to determine the predictive roles of the variables of this study on subjective happiness with different sample groups and by using different measurement tools. It can be useful to examine the predictive role of other positive psychological concepts such as optimism, hope, gratitude, and self-esteem.

The results demonstrated that subjective happiness has a positive relationship with positivity and forgiveness. It can be said that this result has presented a theoretical and empirical framework for researchers and has made a contribution to the literature of positive psychology. In addition, experimental studies are needed to reveal the factors that enhance subjective happiness. In the current study, the study group was composed of university students. Thus, the predictor role of the study variables on subjective happiness can be examined in different study groups. Using different measurement tools and the characteristics of sample groups may be the reason of contradictory results about the religious attitude in the literature. Further studies are needed in order to make better

inferences. Therefore, different measurement tools may be used to assess subjective happiness and religious attitude and the predictive roles of study variables on subjective happiness and religious attitude.

In addition, these results are also important for mental health professionals working with university students, and some suggestions can be made in the light of the findings obtained from this research. The results of the present study suggested that positivity and forgiveness are important constructs which have an impact on subjective happiness. Thus, it may be important to develop preventive and supportive interventions including positivity and forgiveness which have contributed to subjective happiness. The present study also suggests that it is advisable to improve intervention or psycho-educational programs which focused on increasing positivity and well-being to promote students' subjective happiness level. In fact, along with focusing positive human traits and strengths, positive psychology has a preventive role (Akin-Little et al., 2004). If we consider that eliminating problems before they occur and minimising the future potential risks of current problems are the main aims of preventive services, subjective well-being as an important construct of positive psychology play a crucial role in preventing possible risks in human life. In addition, Lyubomirsky et al. (2005) emphasised that personal factors should not be ignored in evaluating the effectiveness of positive psychological interventions. As Lyubomirsky (2001) notes, it seems more functional to change thoughts and emotions significantly through activities to increase happiness rather than waiting for happiness. Therefore, professionals and school counselors may organise workshops and training seminars on subjective happiness and mental health including the topics of positivity and forgiveness for students, parents, teachers and school managers. In the university environment, by creating a supportive university climate that promotes positivity and forgiveness as enhancers of subjective well-being, the teaching staff and other staff may be more helpful for students.

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Appendix A

The subjective happiness scale (SHS).

- 1 In General, I consider myself: not a very happy person (1) 2 3 4 5 6 a very happy person (7).
- 2 Compared to most of my peers, I consider myself less happy (1) 2 3 4 5 6 more happy (7).
- 3 Some people are generally very happy. They enjoy life regardless of what is going on, getting the most out of everything. To what extent does this characterization describe you? Not at all (1) 2 3 4 5 6 a great deal (7).

- 4 Some people are generally not very happy. Although they are not depressed, they never seem as happy as they might be. To what extent does this characterization describe you? Not at all (1) 2 3 4 5 6 a great deal (7).

The positivity scale (PS)

- 1 I have great faith in the future.
- 2 Others are generally here for me when I need them.
- 3 I am satisfied with my life.
- 4 At times, the future seems unclear to me. (r)
- 5 I generally feel confident in myself.
- 6 I look forward to the future with hope and enthusiasm.
- 7 I feel I have many things to be proud of.
- 8 On the whole, I am satisfied with myself.

Forgiveness scale (FS)

- 1 I do not forgive myself for the mistakes I have made.
- 2 I criticize myself for my negative thoughts.
- 3 I constantly criticize myself for the negative things I do.
- 4 Over time, I will be more understanding of those who hurt me.
- 5 I can see people who have hurt me in the past later as other people.
- 6 I maintain my negative opinion about those who mistreat me.
- 7 My relatives think that I hold a grudge for a long time.
- 8 If someone treats me badly, I will treat him the same way.
- 9 I try to forgive him, even though the person who treated me wrong does not feel guilty.
- 10 I have always forgiven people who hurt me.
- 11 If the person who hurt me is in a difficult situation, I will help him.
- 12 I make peace when I meet someone who I got upset with it because of his error.
- 13 I can forgive the person who made the mistake.

Ok-Religious attitude scale (ORAS)

- 1 I think religion is unnecessary
- 2 I think religious belief has more harm than good to people
- 3 I get emotional when I listen to religious readings like adhan, prayer or verse
- 4 I really enjoy when I attend religious events

- 5 I pay attention to whether my life is suitable for religious values.
- 6 I try to fulfil the requirements of the religion I believe in
- 7 I think that Allah helped me in difficult times.
- 8 I feel that God is very close to me.