



Forgiveness and Forgiveness Probability Scales: Validity and Reliability Study of Turkey

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ABSTRACT

The purpose of this study is to examine the validity and reliability of the Forgiveness and Forgiveness Probability Scales, developed by Rye, Loiacono, Folck, Olszewski, Heim and Madia (2001), in Turkey. This study included 180 women whose children receive education in high schools on the voluntary basis for the validity and reliability study of the scales. Confirmatory Factor Analysis (CFA) was applied to assess whether the structure of the 2-factor and 15-item structure of the Forgiveness Scale and the single-factor and 10-item structure of the Forgiveness Probability Scale are verified. In the first CFA applied, items with a statistically insignificant t value were examined. According to this review, no material with an insignificant t value was found on both scales. When the coefficients showing the relationship between the observed variables and the factors of the model showing the factorial structure of both scales were examined, it was concluded that all the compliance indices were sufficient. Taking into account the compliance statistics calculated with the CFA, the previously determined single and two factor structures of Forgiveness Scale and Forgiveness Probability Scale are generally compatible with the collected data.

Key Words: Forgiveness, Forgiveness Probability, Forgiveness Scale

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Introduction

Unfortunately, the issue of forgiveness that has been mentioned in the field of religion and philosophy since the early ages has not been encountered in psychology literature until the last quarter of the century. In particular, negative attitudes and behaviors were addressed with priority in the early stages of the psychoanalytic approach, which leads the contemporary psychological theories. In the field of psychology, in the past, the concepts of "aggression, stress and conflict" have been focused on more than the concepts of "forgiveness, helping, love and tolerance." But in recent years, there has been an increased interest in positive psychology and many studies on this subject. Forgiveness is also one of these issues.

Enright *et al.*, (1998) argue that forgiveness is a process of giving up regret,

negative judgment and ignorance attitude towards a person that hurt someone and bearing the feelings of affection, generosity, and even love towards that person. Forgiveness, when we expect to forgive a person with whom we do not want a permanent relationship is defined as the reduction or elimination of anger and motivation for revenge.

McCullough *et al.*, (1998) define the nature of forgiveness as a prosocial change that takes place in the instincts against the suicide committed by an engaged party (p.1586). Forgiveness occurs in an interpersonal context. Some theoreticians (Augsburger, 1996), clinicians (Hargrave & Sells, 1997), and scholars emphasized the interpersonal aspects of forgiving. Scientific research on forgiveness continues today in many areas of psychology.

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The researches carried out in this regard are mainly addressed as follows.

1. Finding scales that show forgiveness tendency (Rye *et al.*, 2001; Regalia & Paleari, 2014; Griffin, 2016),

2. Examining the health and psychobiologic consequences of forgiveness (Berry & Worthington, 2001, Farrow *et al.*, 2001, Seybold, Hill, Neumann & Chi 2001, Toussaint, Williams, Musick & Everson 2001; Van Oyen Witvliet 2001; Fincham 2015).

3. Explaining the situational and tendency relations of the forgiveness (Sandage *et al.*, 2000),

4. Examining the mental health-forgiveness relationship and the benefits of forgiveness in interpersonal relationships (Tuck & Anderson, 2014; Hargrave & Zasowski, 2016).

The increasing interest in forgiveness led to many studies in many subjects such as the overcoming of marital problems with the increased interpersonal relationship quality (Aalgaard, Bolen & Nugent, 2016; Kato, 2015; Kimmes & Durtschi, 2016; Scabini, 2016), the improvement of health by forgiveness (Carson *et al.*, 2005; Worthington *et al.*, 2016), forgiveness in children, adolescents, adults and old people (Allemand, Steiner & Hill, 2013; Pareek, Maltur & Mangnani, 2016; Wal, Karremans & Cillessen, 2017), examination of factors for the forgiveness tendency (Blatt & Wertheim, 2015).

As in the whole world, many studies have been done in our country about the forgiveness and the subject has been attracting the attention of experts in various fields. In Turkey, in religion and philosophy (Ayten, 2009; Uysal, 2015), education (Kaya & Peker, 2016, Ulus, 2015), health (Güloğlu, Kararmak & Emiral, 2016), psychology (Alpay, 2009; Burgay & Demir, 2012) and even in the areas of economic and administrative sciences (Şener & Çetinkaya, 2015; Yılmaz, 2014), it is seen that many academicians have carried out scientific studies on forgiveness. In recent years, a number of studies have been conducted to investigate how and under what conditions forgiveness occur, what psychological variables that predict forgiveness and what criteria of the forgiveness may be, and different evaluation tools have been developed to determine the forgiveness tendency (Berry & Worthington, 2001; Worthington & Wade, 1999; Thompson *et al.*, 2005; Kamat, Jones & Raw, 2006, Regalia & Paleari, 2014; Griffin, 2016). These scales include relationships of forgiveness with the personality structure, forgiveness types such

as emotional and determined, forgiveness forms such as forgiving oneself or others, ability to forgive or feeling of being forgiven. The increase in interest in this issue in Turkey has increased the need for scale related to the forgiveness.

The purpose of this research is to adapt Forgiveness and Forgiveness Probability scales, developed by Rye *et al.*, (2001) to Turkish and examine the validity and reliability of scales. The Forgiveness Scale consists of 15 likert type questions designed to measure the level of forgiveness. McCullough, Hoyt, and Rachal (2000) have outlined 3X2X4 taxonomy to classify currently available forgiveness measures. The first level of taxonomy concerns measurement specificity. At this level, forgiveness measures can be specific to offense, dyadic and specific to tendency. The second level of taxonomy is about the direction of forgiveness. As McCullough *et al.*, (2000) stated forgiveness can also be considered from the point of view of the offender as well as from the point of view of the forgiving person.

Finally, the methods used in the analysis of forgiveness may include self-reporting, reporting of the partner, reporting from the external observer, and constructive and destructive behavior against the offender. The Forgiveness Scale developed by Rye *et al.*, (2001) corresponds to all levels of this proposed taxonomy. Items for this scale were created to measure the emotional, cognitive, and behavioral responses to victimization like a scale designed to measure the forgiveness of a particular offender, as well as Forgiveness Probability Scale and Enright Forgiveness Scale (Subkoviak *et al.*, 1995) designed to measure the individual's forgiveness tendency in a specific situation. Those who responded to the scale were asked to think how they respond to an unjust or abusive person. The scale is composed of 15 items using the likert-type format and responses range from 1 (I absolutely disagree) to 5 (I absolutely agree). Ten scenarios with hypothetical victimization were developed in Forgiveness Probability scale (disloyalty, defamation, robbery); these are situations that can provide a meaningful judgment in the face of possible events in life. Participants were asked to imagine that these scenarios happen to them and to consider the probability of being willing to forgive the offender in this case. The scale was created using a Likert-type format and responses range from 1 (I absolutely disagree) to 5 (I absolutely agree). After Forgiveness and Forgiveness Probability scales were developed,



they were applied to 328 persons, 67.7% of whom are women aged between 18 and 41 years. Cronbach alpha value of the Forgiveness Scale was found to be .85 and .86 in the negative and positive forgiveness directions and Cronbach alpha value of the whole scale was .87.

The reliability total of test-retest performed after 15.2 days on average was .76. Factor analysis of Forgiveness Probability Scale indicated a Cronbach alpha value of .85 and a reliability of .81 for test-retest over 15.2 days on average. Cronbachs alpha value was found to be sufficient for both the Forgiveness Scale and Forgiveness Probability Scale (Rye *et al.*, 2001).

Methods

Study Group

The 180 women whose children attend the high schools constituted the study group of this research. The average age of the women studied is 43,2. If the education of women is taken into consideration; it can be seen that most of them (45.8%) were high school graduates. Among the participants, 18.2% were university graduates; primary and secondary education graduates constituted 36%.

Process

Forgiveness and Forgiveness Probability Scale Language Adaptation Study

The English-Turkish translation of the items in the original form of the Forgiveness and Forgiveness Probability Scales was conducted by two language experts. After the editing of the items translated into Turkish made by a field specialist, another language expert translated them into English again. It was determined that there is no difference between the English and Turkish forms when the two translations were compared. The scales translated into Turkish were examined by the Turkish Language Expert and edited according to the recommendations of the expert. Finally, the "Expert Evaluation Form" was sent by the researchers in order to receive the opinions of a total of nine experts to evaluate the suitability of the expressions for Turkish Culture and the competency to measure the characteristics desired to be measured. They were expected to write the suggestions or explanations regarding the conformity of the translation from Turkish into English with the original English version, the conformity with the target group, whether the item represents the scale and the conformity with Turkish as "Acceptable, Not Acceptable". The

items of the scales were given the final form in line with the suggestions and explanations written, the reviews from the experts were taken into consideration and no inappropriate material was found on the scales because no expert stated any item as "not acceptable".

Preliminary Pilot Study

A preliminary pilot study was conducted to determine the language clarity and validity of the scale. After the scale was applied to a total of 20 mothers whose children attended to the 9th, 10th, 11th and 12th grades, the clarity of the items in the scale was assessed and necessary editing were made.

Pilot Study

A total of 180 mothers who were children during adolescence were included in the scale adaptation study in Turkish. Scale children were asked to respond to questions by making necessary explanations distributed to volunteers from 9th, 10th, 11th and 12th class mothers. The data was collected via the Turkish version of Forgiveness and Forgiveness Probability Scale for the purpose of being adapted by the researcher. Data, collected from the mothers of adolescents, was entered in the SPSS 15.0 statistical program.

Results

There are 2 factors and 15 items in the Forgiveness Scale. The 10 items in this scale constitute the "absence of negatives" factor; and 5 items constitute the "presence of positive" factor. First level confirmatory factor analysis (CFA) was used to examine whether the 2 factor and the 15 item structure of the scale was verified. CFA was applied to evaluate whether the single factor and 10 item structure was verified in Forgiveness Probability scale. Confirmatory factor analysis (CFA) aims to assess the extent to which a factorial model consisting of factors (latent variables) generated by many observable variables conforms to the actual data. The model to be examined may define a fictionalized structure based on a specific theory or determined using data from an empirical study. Confirmatory factor analysis was used to examine the validity of the structure in the study. Confirmatory factor analysis is a kind of hypothesis test. These hypotheses prove the relationships of latent factors and observation variables determined by the researcher according to the theoretical information and the



relationships of latent factors among themselves (Şencan, 2005).

Factor Structure of Forgiveness Scale

First level confirmatory factor analysis (CFA) was used to examine whether the 2 factor and 15 item structure of the scale was verified. In the first CFA applied, items with a statistically insignificant t value were examined. According to this examination, no item with a statistically insignificant t value was found. The obtained path diagram is shown in Figure 2.

The compliance indices were found as $\chi^2=247.43$, $X^2/sd= 2.78$, CFI=0.80, NNFI=0.76, AGFI=0.82 and GFI=0.87. When the coefficients showing the relationship between the observed variables and factors of the model showing the factorial structure of the scale were examined, it was concluded that especially the $X^2/sdsz<ty$ compliance index was sufficient. Given the compliance statistics calculated with CFA, it was decided that the previously determined 2-factor structure of the scale conforms to the collected data in general.

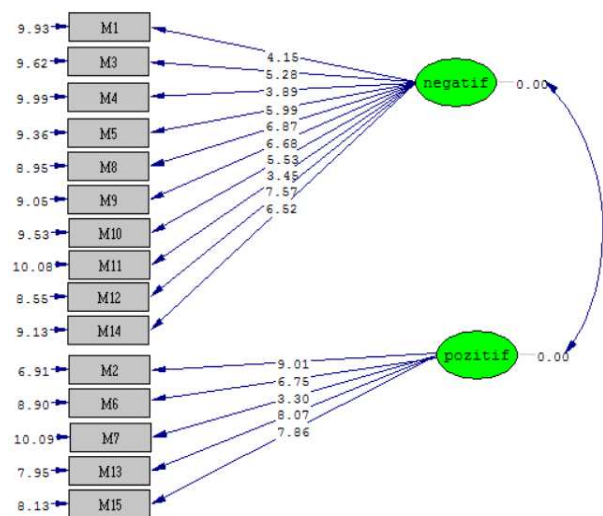


Figure1. Path Diagram Of Forgiveness Scale

When Figure 1 is examined, it can be seen that the final state of the scale is composed of 15 items and 2 factors. The first factor, the "absence of negative" factor, is composed of items 1, 3, 4, 5, 8, 9, 10, 11, 12 and 14; hile the "presence of positive" factor is composed of items 2, 6, 7, 13 and 15.

Table 1 shows the regression values and t values of the items.

Table 1.Regression and T Values of CFA

Items	Regression values	t values
M1	0.32	4.15
M2	0.67	9.01
M3	0.41	5.28
M4	0.30	3.89
M5	0.46	5.99
M6	0.51	6.75
M7	0.26	6.93
M8	0.52	3.30
M9	0.50	6.68
M10	0.42	5.53
M11	0.27	3.45
M12	0.56	7.57
M13	0.60	8.07
M14	0.49	6.52
M15	0.59	7.86

Table 1 show that the obtained regression coefficients and t values are significant and that the model is verified.

Factor Structure of Forgiveness Probability Scale

CFA was applied to evaluate whether the single factor and 10 item structure of the scale was verified. In the first CFA applied, items with a statistically insignificant t value were examined. According to this examination, no item with the insignificant t value was found. The obtained path diagram is shown in Figure 2.

The compliance indices were found as $\chi^2=110.58$, $X^2/sd= 3.16$, CFI=0.91, NNFI=0.89, AGFI=0.85 and GFI=0.91. When the coefficients showing the relationship between the observed variables and factors of the model showing the factorial structure of the scale were examined, it was concluded that all the compliance indices were sufficient. Given the compliance statistics calculated with CFA, it was decided that the previously determined single factor structure of the scale conforms to the collected data in general.

Table 2. Regression and T Values of CFA

Items	Regression values	t values
M1	0.57	8.52
M2	0.77	12.58
M3	0.78	12.70
M4	0.34	4.83
M5	0.70	11.11
M6	0.57	8.53
M7	0.22	3.04
M8	0.50	7.34
M9	0.46	6.65
M10	0.21	2.93



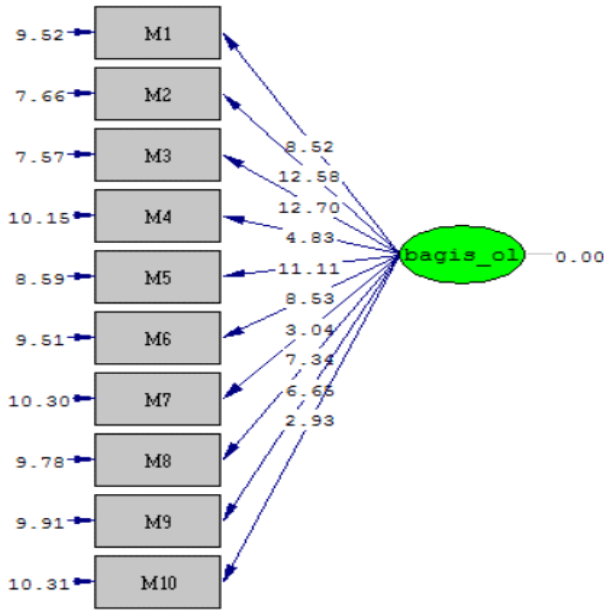


Figure 2. Path Diagram of Forgiveness Probability Scale

When Figure 2 is examined, it is seen that the scale consists of 10 items and single factor. Table 2 shows the regression values and t values of the items.

When Table 2 was examined, it was determined that the obtained regression coefficients and t values are significant and that the model is verified.

Discussion

The purpose of this research is to adapt Forgiveness and Forgiveness Probability Scales to Turkish and examine the validity and reliability analyzes of the scales. For the linguistic conformity study, which is extremely important in scale adaptation, English and Turkish translation studies of the Forgiveness and Forgiveness Probability Scales were performed and all of the items were revised in accordance with the original forms of factors. Both scales show a good level of conformity and the original factorial structure of the scale is consistent with the factorial structure of Turkish version considering the compliance index limits of the both scales for CFA. No item was removed from these scales in the light of these results and it was determined to have sufficient statistical results to be made in our country.

Conclusion

The Forgiveness Scale compliance indices were found as $\chi^2=247.43$, $X^2/sd= 2.78$, CFI=0.80, NNFI=0.76, AGFI=0.82 and GFI=0.87. When the

coefficients showing the relationship between the observed variables and factors of the model showing the factorial structure of the scale were examined, it was concluded that $X^2/sdsz<ty$ compliance index was sufficient. Given the compliance statistics calculated with CFA it was decided that the previously determined 2 factor structure of the scale conforms to the collected data in general.

The Forgiveness Probability Scale compliance indices were found as $\chi^2=110.58$, $X^2/sd= 3.16$, CFI=0.91, NNFI=0.89, AGFI=0.85 and GFI=0.91. When the coefficients showing the relationship between the observed variables and factors of the model showing the factorial structure of the scale were examined, it was concluded that all the compliance indices were sufficient. Given the compliance statistics calculated with CFA, it was decided that the previously determined single factor structure of the scale conforms to the collected data in general. Some suggestions can be made in the context of findings from validity and reliability studies for Forgiveness and Forgiveness Probability Scales. Firstly, in order to determine the adaptability of the scale, the relationships between the scales with proved validity and reliability, which assess the various psychological structures (empathy, lenience, tolerance, etc.) that may be related to forgiveness, and Forgiveness and Forgiveness Probability Scales, are examined. In addition, the study group of the studies for reliability and validity of the scale were carried out consisted of women. Therefore, for the validity and reliability of the scale, there should also be other studies to be performed on different samples in the future. Finally, performing the studies where this scale will be used will provide significant contributions to the evaluation power.

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