



DEVELOPMENT OF THE FORGIVENESS SCALE: A STUDY OF RELIABILITY AND VALIDITY*

*Kurtman ERSANLI***

*Meryem VURAL BATIK****

STRUCTURED ABSTRACT

There are many definitions of the concept of forgiveness made in the related literature. Forgiveness is not condoning, forgetting or ignoring a painful experience (Madsen, Gygi, Hammond and Plowman, 2009); it is "a willingness to abandon one's right to resentment, negative judgment, and indifferent behaviour toward one who unjustly injured us, while fostering the undeserved qualities of compassion, generosity and even love toward him or her" (Enright and The Human Development Study Group, 1996). Forgiveness includes an individual's forgiving himself (forgiveness of self) due to what he has done and one's forgiving another individual (forgiveness of others) who hurts himself (Enright and Fitzgibbons, 2000).

That there are several scales abroad to determine the level of forgiveness (Berry et al., 2001; Elliot, 2010; Thompson et al., 2005; Enright, Rique and Coyle, 2000; Rye et al., 2001; Mauger et al., 1992; Harris et al., 2006; Wade, 1989; McCullough, Worthington and Rachal, 1998) made contribution to doing many researches about forgiveness in recent years and developing some models to describe the structure of forgiveness concept. Some of these scales (Bugay and Demir, 2010; Sariçam and Akın, 2013; Sariçam et al., 2012; Taysi, 2007; Yıldırım, 2009) were adapted into Turkish. However; no forgiveness scale developed in Turkish culture is observed in the literature review. It is considered that the scale developed in this study will contribute to the studies to be performed with respect to forgiveness.

The aim of this study is to develop a valid and reliable measuring instrument to be used for determining the level of forgiveness. Within the development process of Forgiveness Scale, data were obtained from 476 undergraduate students in total, 333 (70%) of whom are females and 143 of whom are males.

* Bu makale Crosscheck sistemi tarafından taranmış ve bu sistem sonuçlarına göre orijinal bir makale olduğu tespit edilmiştir.

** Prof. Dr., Ondokuz Mayıs University, Faculty of Education, Department of Educational Sciences, El-mek: kersanli@omu.edu.tr

*** **Corresponding Author**, Lecturer, Ondokuz Mayıs University, Faculty of Education, Department of Special Education, El-mek: meryem.vural@omu.edu.tr



In the first phase, an item pool form was prepared consisting of 49 items which are considered to include this definition with all properties therewith within the “forgiveness” definition. This initial scale form is designed so as to be submitted to expert judgments in order to examine content validity and it was handed to seven experts whose professional field is Psychological Counseling and Guidance and their judgments were received. Based on the judgments from the experts, inconvenient items are excluded and a test form consisting of 26 items was prepared after required corrections were made. Placing an answering chart consisting of seven options against each item in the test scale form, a 7-point Likert-type scale was developed.

After the test scale form consisting of 26 items was applied to 197 students, item test correlations were calculated with respect to item validity and homogeneity of the scale. The test scale form was reduced to 21 items in total thereby eliminating 6 items, correlations of which are under 0.30.

The test scale with 21-item was again applied to 195 students and it was tested with Kaiser-Meyer-Olkin (KMO) coefficient and Barlett Sphericity. KMO sampling fitness coefficient was found as 0.829, χ^2 value for Barlett Sphericity test was found to be 1103,467 ($p < .001$). Such results indicate that data fit is adequate to conduct factor analysis. Exploratory factor analysis (EFA) with Varimax-rotation was conducted on the test scale 21-items Forgiveness Scale and 8 items was eliminated from the scale due to a loading below .30 on both factors. Thus it was specified that remaining 13 items gathered in 2 subscales as a result of exploratory factor analysis. These two factors explains 46,09% of total variance. The first subscale called as “Forgiveness of Others” is composed of the last 10 items and the eigenvalue that gives information about significance level and weight of each factor in the structure was found to be 3.76. This first factor alone explains 28,98% of the variance as regards forgiveness variable. The second subscale called as “Self-Forgiveness” consists of the first 3 items and eigenvalue concerning this factor was found as 2.22. This second factor alone explains 17,1% of the variance as regards forgiveness variable.

In confirmatory factor analysis it has been found that two-dimensional model is within acceptable fit limits ($\chi^2/sd=1.95$, RMSEA= .07, GFI= .91, AGFI= .87, SRMR= .06, NNFI= .89, CFI= .91). In this case, the obtained values and factor loadings of the items indicate that model is acceptable.

As regards the last phase, in the study for criterion-related validity of the scale, “Tolerance Scale (Ersanli, 2014)” was applied as a corresponding scale to 84 undergraduates. It was found out that there is positive correlation between forgiveness and tolerance ($r = .56$, $p < .001$). Internal consistency coefficient and split half reliability of the scale were calculated on the data received from 476 undergraduate students in total who were reached for validity and reliability analysis. Internal consistency (Cronbach’s alpha) coefficient obtained as a result of this was .74. Internal consistency coefficient of first subscale which is called as “Forgiveness of Other” was .76; and internal consistency coefficient of second subscale which is called as “Forgiveness of Self” was .82. And the split half reliability coefficient was found as .71 for the

Turkish Studies

International Periodical For the Languages, Literature and History of Turkish or Turkic
Volume 10/7 Spring 2015



first half, and .77 for the second half. These results indicate an adequate reliability for Forgiveness Scale.

According to all these results, it can be said that Forgiveness Scale developed for Turkish Culture in order to determine forgiveness level of undergraduates is a valid and reliable scale. The scale, consisting of 13 items in total, is a Likert-type format with response options ranging from 1 (minimum) to 7 (maximum). The first subscale called as “Forgiveness of Others” consists of 10 items; whereas the second subscale called as “Forgiveness of Self” consists of 3 items. Six items in the scale are reverse scored. The lowest point and the highest point to be taken from the scale are 13 and 91 respectively. The high score obtained from the scale indicates a high level of forgiveness, whereas the low total score is an indication of low level of forgiveness.

Forgiveness includes an individual’s forgiving himself (forgiveness of self) and one’s forgiving another individual (forgiveness of others) (Enright and Fitzgibbons, 2000). However; forgiveness has dimensions according to Thompson et al., (2005) such as “forgiveness of others”, forgiveness of self” and “forgiveness of situation”. Although there are no items in this scale with respect to the dimension of “forgiveness of situation”, explained variance is remarkable. This study was performed along with the data obtained from undergraduate students. Scale versions appropriate for all age groups could be developed thereby carrying out validity and reliability studies of the scale with different groups and age ranges. Since this scale is two dimensional as “forgiveness of others” and “forgiveness of self”, new studies can be conducted in order to gain “forgiveness of situation” dimension to the scale.

Key Words: Forgiveness, forgiveness of self, forgiveness of others, scale development

AFFETME ÖLÇEĞİ: GEÇERLİK VE GÜVENİRLİK ÇALIŞMASI

ÖZET

Bu çalışmada üniversite öğrencilerinin affetme düzeylerini belirlemeye yönelik “Affetme Ölçeği’nin geliştirilmesi amaçlanmıştır. Araştırma, 333’ü (%70) kız, 143’ü (%30) erkek olmak üzere, toplam 476 üniversite öğrencisi üzerinde yürütülmüştür. Yedili Likert tipi olan ölçekte tercih düzeyi, “1= en az ile 7= en çok” arasında değişmektedir. Ölçekten alınan puanın artması affetme düzeyinin de arttığını göstermektedir. Affetme Ölçeği’nin faktör yapısını incelemek ve alt boyutlarını belirleyebilmek amacıyla yapılan açımlayıcı faktör analizi sonucunda 13 maddenin, toplam varyansın % 46,09’unu açıkladığı ve iki alt boyutta toplandığı görülmüştür. “Başkasını Affetme” olarak adlandırılan birinci alt boyut 10 maddeden oluşmaktadır ve affetme değişkenine ait varyansın %28,98’ini açıklamaktadır. “Kendini Affetme” olarak adlandırılan ikinci alt boyut ise 3 maddeden oluşmaktadır ve varyansın %17,1’ini açıklamaktadır. Ölçeği oluşturan maddelere ilişkin faktör yükleri ise .538 ile .873 arasında değişmektedir. Doğrulamalı faktör analizinde iki boyutlu modelin kabul edilebilir uyum verdiği

Turkish Studies

International Periodical For the Languages, Literature and History of Turkish or Turkic
Volume 10/7 Spring 2015



görülmüştür ($\chi^2/sd=1.95$, RMSEA= .07, GFI= .91, AGFI= .87, SRMR= .06, NNFI= .89, CFI= .91). Affetme Ölçeği'nin iç tutarlılık güvenilirlik katsayıları “Başkasını Affetme” alt ölçeği için .76, “Kendini Affetme” alt ölçeği için .82 ve ölçeğin bütünü için .74'tür. Eş değer ölçek geçerliği çalışmasında Affetme Ölçeği ile Tolerans Ölçeği arasındaki korelasyon hesaplanmış; affetme ile tolerans arasında pozitif ilişki olduğu görülmüştür. Elde edilen bulgular Türk kültüründe geliştirilen Affetme Ölçeği'nin geçerli ve güvenilir bir ölçme aracı olduğunu göstermektedir.

Anahtar Kelimeler: Affetme, kendini affetme, başkasını affetme, geçerlik, güvenilirlik

Introduction

It is stated that forgiveness has a history as long as that of human beings (Droll, 1984). There are many definitions of the concept of forgiveness made in the related literature. Forgiveness is not condoning, forgetting or ignoring a painful experience (Madsen, Gygi, Hammond and Plowman, 2009); it is “a willingness to abandon one's right to resentment, negative judgment, and indifferent behaviour toward one who unjustly injured us, while fostering the undeserved qualities of compassion, generosity and even love toward him or her” (Enright and The Human Development Study Group, 1996).

Forgiveness includes an individual's forgiving himself (forgiveness of self) due to what he has done and one's forgiving another individual (forgiveness of others) who hurts himself (Enright and Fitzgibbons, 2000). However; it is observed that mostly forgiving others is discussed in the literature. According to Scobie and Scobie (1998), the following may be the reason why an individual does not consciously use his right to reimburse and retaliate against someone else who has acted damagingly towards himself; 1) Repairing and restoring the current or amended relationship, 2) Reducing the adverse effects of harmful behaviours for the forgiver and forgiven, 3) The fact that forgiver does not have to act the role of a sufferer and that the forgiven makes up for his mistakes, 4) Forgiver and forgiven gets rid of prevailing adverse effect of injurious behaviour. In this forgiveness process, the individual consciously and willingly tries to develop reactions that can result in favourable outcomes such as compassion, empathy and generosity instead of negative reactions such as anger, disappointment and punishment (Enright and Fitzgibbons, 2000).

Individuals can also exhibit different reactions in forgiveness process. In fact, McCullough and Hoyt (2002) stated that some people are more inclined to forgiveness than others. It is asserted that such difference stems from personal traits such as empathy, good sense, emotional maturity and being resistant to attacks (Kamat, Jones and Row, 2006). Further, intimacy level in the relationship is important for forgiveness (Alpay, 2009). However; Bugay and Demir (2011) remarked that the characteristics of the offense predict forgiveness of others. According to this, characteristics such as the scope of the offense (family, education, romantic relations, social, financial, friendship), intensity (degree) of the offense, compensability of the offense, deliberateness of the offense, the result of the offense, apologizing for the offense, who owns the responsibility regarding the offense, and who did the offense affect forgiveness.

Forgiveness of others may be negotiated or unilateral (Andrews, 2000). In negotiated forgiveness, the negotiation made with the wrongdoer creates an environment allowing the realization of forgiveness and wrongdoer seeks for an opportunity to be forgiven (Enright, Freedman and Rique, 1998). Whereas the unilateral forgiveness is completely related to the person, itself. Nothing is expected from the wrongdoer. The wronged may offer forgiveness to the

Turkish Studies

International Periodical For the Languages, Literature and History of Turkish or Turkic
Volume 10/7 Spring 2015



wrongdoer at a time he prefers (Andrews, 2000). It can be said that forgiveness intervention programmes prepared to enhance forgiveness tendency, reduce negative thoughts and emotions (Al-Mabuk, Enright and Cardis, 1995; Blocher and Wade, 2010; Bugay and Demir, 2012; Graham, Enright and Klatt, 2012; Hall and Fincham, 2005; Harris et al., 2006; Hui and Chau, 2009; Ingersoll-Dayton, Campbell and Jung-Hwa, 2009; Luskin, 2002; McCollough and Worthington, 1995; Sandage and Worthington, 2010; Worthington, 1998; Worthington et al., 2000) are based on unilateral forgiveness. In such intervention programmes, it is aimed to eliminate or reduce negative emotions such as anger and worry, thoughts such as revenge and behaviours such as avoidance and uncover more positive emotions, thoughts, and behaviours against a specific hurtful event or towards a transgressor (Enright and Fitzgibbons, 2000; Wade and Worthington, 2005; Worthington and Wade, 1999).

According to Enright's (1996) Process Model of Forgiveness which is widely acknowledged in the literature, sessions in forgiveness interventions should be performed in consideration of four phases of forgiveness (uncovering, deciding, working and deepening) and a total of 20 units following each other within these phases. Process Model of Forgiveness has been organized in two different ways for sub-dimensions of forgiveness of self and forgiveness of others. In the Uncovering Phase (Units 1-8), which is the first phase, a person "gains insight into whether and how the offense and subsequent injury have compromised his or her life" and describes the pain experienced. Decision Phase (Units 9-11) is the phase in which a person thinks "what forgiveness is and what it is not." When a person decides to forgive, he experiences a cognitive process. In the Work Phase (Units 12-15), a person "begins to view the offender as a human-being beyond the offense performed." He starts to have compassion for the offender and develops a different perspective showing empathy towards him. In the Deepening Phase (Units 16-20), which is the last phase, a person "finds new meanings and positive targets in the suffering and injustice experienced, thinks whether there are times in the past in which he, himself wanted to be forgiven and considers experiences regarding being forgiven." Thus the person internalizes and makes sense of the concept of forgiveness in all aspects rather well (Enright and Fitzgibbons, 2000). It is important to prepare and implement educational programmes to support this forgiveness process. As a matter of fact, assessments with regard to the efficiency of forgiveness are observed in family therapies, couple relations, and depression and anger treatments and in psychotherapy studies carried out in different fields such as sexual abuse and personality disorders (Hargrave and Sells, 1997; McCullough, Pargament and Thoresen, 2000). Besides Wade and Worthington (2005) suggest that forgiveness could be used as a therapeutic treatment method for the bitter experiences in the past. However, studies on enhancing forgiveness (Bugay and Demir, 2012; Çardak, 2012) are very little in Turkey.

That there are several scales abroad to determine the level of forgiveness (Berry et al., 2001; Elliot, 2010; Thompson et al., 2005; Enright, Rique and Coyle, 2000; Rye et al., 2001; Mauger et al., 1992; Harris et al., 2006; Wade, 1989; McCullough, Worthington and Rachal, 1998) made contribution to doing many researches about forgiveness in recent years and developing some models to describe the structure of forgiveness concept. Some of these scales (Bugay and Demir, 2010; Sarıçam and Akın, 2013; Sarıçam et al., 2012; Taysi, 2007; Yıldırım, 2009) were adapted into Turkish. However; no forgiveness scale developed in Turkish culture is observed in the literature review. It is considered that the scale developed in this study will contribute to the studies to be performed with respect to forgiveness. The aim of this study is to develop a valid and reliable measuring instrument to be used for determining the level of forgiveness.

Turkish Studies

International Periodical For the Languages, Literature and History of Turkish or Turkic
Volume 10/7 Spring 2015



Method

Participants

Within the development process of Forgiveness Scale, the aim of the study, data were obtained from 476 undergraduate students in total, 333 (70%) of whom are females and 143 of whom are males studying in Faculty of Education in Ondokuz Mayıs University in spring term, in 2013-2014 academic year. Students' age ranged between 17 and 39 ($X=20.79$; $SS=1.94$). Of the students took part in the study, 60,9% ($n=290$) receives education in verbal courses; 12,4% ($n=59$) in math-courses; 14,5% ($n=69$) in equally-weighted courses and 12,1% ($n=58$) in foreign languages courses in Faculty of Education. Further, 35,9% ($n=171$) were first grade students; 26,7% ($n=127$) were second grade students; 22,1% ($n=105$) were third-grade students and 15,3% ($n=73$) were fourth-grade students among those who participated in the survey. Breakdown of study group according to departments and classes are indicated in Table 1.

Table 1. Breakdown of sample according to departments

Department		N	%
Verbal Courses	Social Sciences Teacher Education	45	9,5
	Teacher Education for Hearing Impaired	109	22,9
	Teacher Education for Mentally Challenged	30	6,3
	Turkish Language Teacher Education	40	8,4
	Primary Ethics and Religion Teacher Education	66	13,9
Math Courses	Mathematics Teacher Education	27	5,7
	Science Teacher Education	32	6,7
Equally-Weighted Courses	Psychological Counseling and Guidance	20	4,2
	Primary School Teacher Education	49	10,3
Foreign Languages Courses	French Language Teacher Education	22	4,6
	German Language Teacher Education	36	7,6
Total		476	100,0

Three study groups were created within the process of developing Forgiveness Scale. These groups had the following characteristics:

The first study group: This group consists of 197 students in total that were reached to examine item-test correlations of the items in the item pool produced. Of these students, 89 of them were first-grade, 32 of them were second-grade, 48 of them were third-grade and 28 of them were fourth-grade students; being 145 female and 52 male.

The second study group: This group consists of 195 students in total that were reached to examine construct validity of the scale for exploratory and confirmatory factor analysis. Of these students, 38 of them were first-grade, 62 of them were second-grade, 50 of them were third-grade and 45 of them were fourth-grade students; being 132 female and 63 male.

The third study group: This group consists of 84 students who were reached to test examine criterion validity of the scale. Of these students, 56 (66,7%) were female and 28 (33,3%) were male.

Instruments

In the study, "Tolerance Scale" was used for criterion-related validity. Moreover, demographic information was gathered via Personal Information Sheet.

Tolerance Scale: The scale, developed by Ersanlı (2014) is an 11-item five-point Likert-type measuring instrument. As a result of reliability analysis on the data gathered from 606 undergraduates, Cronbach's alpha coefficient was found to be .84. As regards the results of

Turkish Studies

International Periodical For the Languages, Literature and History of Turkish or Turkic
Volume 10/7 Spring 2015



exploratory factor analysis, it is observed that the scale is one-dimensional and explains 39,37% of the total variation; and following the results of confirmatory factor analysis it is seen that the model exhibits adequate level of fit for survey data (RMSEA=.047,GFI=.97, CFI=.98, NFI=.97). Based on these results, it can be said that the Tolerance Scale is a valid and reliable measuring instrument.

Procedure

In the first phase, an extensive literature review was performed with respect to “forgiveness” theories to be measured, and a definition was created thereby examining related publications from the dissertations and academic database. An item pool form was prepared consisting of 49 items which are considered to include this definition with all properties therewith within the “forgiveness” definition. This initial scale form is designed so as to be submitted to expert judgments in order to examine content validity and it was handed to four experts whose professional field is Psychological Counseling and Guidance and their judgments were received. Such initial form is rearranged in accordance with the feedback received. This redrawn form is again given to another three experts whose Professional field is Psychological Counseling and Guidance and they were asked to evaluate it in terms of compliance with the age group, subject and linguistic rules. Based on the judgments from the experts, inconvenient items are excluded and a test form consisting of 26 items (11 positive and 15 negative) was prepared after required corrections were made. Placing an answering chart consisting of seven options against each item in the test scale form, a 7-point Likert-type scale was developed. Negative items are reverse scored.

In the second phase, the prepared test scale form was applied to 200 undergraduate students, who were chosen by a proper sampling from non-probability sampling types, among the students studying in 5 different departments of teacher education in Ondokuz Mayıs University in spring term, in 2013-2014 academic year. Since 3 of them were not completely filled in, they were excluded and the data belonging to 197 of them were analysed. Following the item analysis, 5 more items were eliminated and 21 items remained.

As per the third phase, the test scale consisting of remaining 21 items, was applied to 200 undergraduates studying in 5 different departments of teacher education, who were selected via proper sampling. 5 of them were not included in the analysis since they were not completed properly. It was specified that remaining 13 items gathered in two subscales as a result of exploratory factor analysis conducted on 195 data. Exploratory factor analysis was conducted in order to determine whether this factor structure is verified on undergraduate students or not. As a result, the first subscale called as “Forgiveness of Others” consists of 10 items. As regards the second subscale called “Forgiveness of Self”, it consists of 3 items. The high score obtained from the scale indicates a high level of forgiveness, whereas the low total score is an indication of low level of forgiveness.

As regards the fourth phase, in order to determine criterion-related validity of the scale, “Tolerance Scale (Ersanlı, 2014)” was applied as a corresponding scale to 84 students who were selected via proper sampling, among the undergraduates studying in 2 different departments of teacher education.

Data Analysis

SPSS 17.0 and LISREL 8.51 package programmes were utilized to analyse the data. Item analysis was conducted with regard to validity of items in the test scale form created. Fitness of data for factor analysis was examined through Kaiser-Meyer-Olkin (KMO) coefficient and Barlett Sphericity test. Data obtained for construct validity of the Forgiveness Scale were submitted to exploratory factor analysis (EFA) and Confirmatory factor analysis (CFA). EFA aims to reach from a large number of variables (items) to limited number of definable significant structures which can

Turkish Studies

International Periodical For the Languages, Literature and History of Turkish or Turkic
Volume 10/7 Spring 2015



be explained together by such variables (Büyüköztürk, 2011). Whereas CFA is utilized to evaluate to what extent the factors formed from several variables accord with actual data based on theoretical foundation. That is, it is examined in CFA, to what extent a predetermined or fictionalized structure is verified with the data gathered (Sümer, 2000; Yılmaz and Çelik, 2009).

Component matrix was investigated in the first analysis conducted for EFA within the context of principal components analysis for all items and it is paid attention to the criteria that the difference between the factor loading value of the first item and the loading values in other factors must be at least 0.10 (Büyüköztürk, 2009).

Then, CFA was conducted to test the model created via EFA. Standardized values and t-values regarding the variables were controlled through the path diagram produced. Since latent variables are fixed to 1, it is essential that standardized values regarding observed variables not be greater than 1 (Şimşek, 2007). It is controlled whether t values in respect of variables are significant or not at the 0.05 level. Through goodness-of-fit criteria, it is controlled how consistent the relations in the model are together with the data. The chi-square statistic (χ^2), RMSEA, GFI, AGFI, SRMR, NNFI and CFI values are utilized hereunder. Finally, subscales of the scale which is developed with EFA and tested with CFA were entitled in accordance with the properties of the items.

Once and for all, criterion-related validity of Forgiveness Scale was tested with an equivalent scale. As regards the reliability of the scale, it is tested with internal consistency (Cronbach's alpha) coefficient and split half technique.

The results of item analysis, exploratory factor analysis, confirmatory factor analysis and reliability analysis were provided in findings section.

Results

The results of validity and reliability studies for ‘‘Forgiveness Scale’’ developed to measure forgiveness level of undergraduates are as follows:

Results of Validity Study

Content and construct validity of the scale were examined within the validity analysis of Forgiveness Scale. Related to this, the ideas of seven experts from the field of Psychological Counseling and Guidance were asked for. 23 items were removed from the item pool consisting of 49 items in accordance with the feedback taken from the experts. After the test scale form consisting of 26 items was applied to 197 students, item test correlations were calculated with respect to item validity and homogeneity of the scale. The test scale form was reduced to 21 items in total thereby eliminating 6 items, correlations of which are under 0.30.

Exploratory Factor Analysis

The test scale with 21-item was again applied to 195 students and it was tested with Kaiser-Meyer-Olkin (KMO) coefficient and Barlett Sphericity test to see whether the data obtained from retest are fit for factor analysis or not. For the fitness of data for factor analysis, it is essential that KMO value be higher than .60 and Barlett Sphericity test be significant at $p < .01$ significance level (Büyüköztürk, 2011). In this study, KMO sampling fitness coefficient was found as 0.829, χ^2 value for Barlett Sphericity test was found to be 1103,467 ($p < .001$). Such results indicate that data fit is adequate to conduct factor analysis.

Exploratory factor analysis (EFA) with Varimax-rotation was conducted on the test scale 21-items Forgiveness Scale to identify the number of factors to retain and to examine the quality of the items. 8 items was eliminated from the scale due to a loading below .30 on both factors. Thus

Turkish Studies

International Periodical For the Languages, Literature and History of Turkish or Turkic
Volume 10/7 Spring 2015



13 items were included in the final scale. Factor loadings, eigenvalues and percentages of variance accounted for by each factor are presented in Table 2.

Table 2.Factor Loadings, Eigenvalues and Percentages of Variance

Items	1.factor	2.factor
1		.698
2		.873
3		.854
4	.569	
5	.627	
6	.538	
7	.632	
8	.595	
9	.619	
10	.664	
11	.629	
12	.663	
13	.585	
Eigenvalue	3.76	2.22
Variance	28,98%	17,1%
Total Variance	46,09%	

13 items are again subjected to exploratory factor analysis and a structure with 2 factors was developed. These two factors explains 46,09% of total variance. The first subscale called as “Forgiveness of Others” is composed of the last 10 items and the eigenvalue that gives information about significance level and weight of each factor in the structure was found to be 3.76. This first factor alone explains 28,98% of the variance as regards forgiveness variable. The second subscale called as “Self-Forgiveness” consists of the first 3 items and eigenvalue concerning this factor was found as 2.22. This second factor alone explains 17,1% of the variance as regards forgiveness variable. And the factor loadings regarding the items that build up the scale range between .538 and .873.

Confirmatory Factor Analysis

Model estimation process is very important in Structural Equation Modeling. Different estimation methods have different distributional assumptions. When estimation process converges to an acceptable solution, adequacy of model fit should be evaluated. The extent of fit of Structural Equation Model to sampling data is defined with the concept of fit of model. In this study, estimation method was determined considering the fact that data structure is ordinal.

After parameter estimations are obtained for the model developed, fit of the data to model should be assessed. Most widely used model fit indices to assess this conformity are similarity rate chi-square statistic (χ^2), RMSEA (Root-mean-square error approximation), SRMR (Standardized Root Mean Square Residual), GFI (Goodness-of-fit index) and AGFI (Adjusted Goodness-of-fit index), CFI (Comparative Fit Index) and NNFI (Non-Normed Fit Index). It is estimated that factor model being tested indicates perfect fit with the actual data in the event that the rate calculated with structural equation modelling (χ^2/sd) is lower than 3; whereas it indicates medium fit in the event that such rate is lower than 5 (Sümer, 2000). Measurement results regarding the suggested model fit and acceptable limit values of fit criterion are given in Table 3.

Turkish Studies

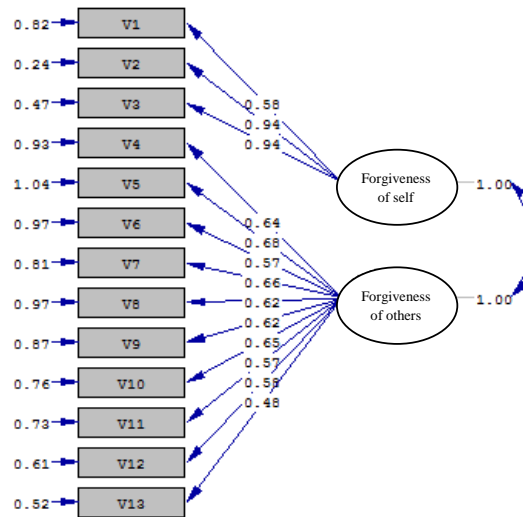
International Periodical For the Languages, Literature and History of Turkish or Turkic
Volume 10/7 Spring 2015



Table 3. Criterion for Goodness-of-Fit and Values Regarding the Model

Criterion for Fitness	Values of Good Fit Limits	Values of Acceptable Fit Limits	Values Regarding This Model
RMSEA	$RMSEA \leq 0.05$	$0.05 < RMSEA \leq 0.10$	0.07
GFI	$0.95 \leq GFI \leq 1$	$0.90 \leq GFI \leq 0.95$	0.91
AGFI	$0.95 \leq AGFI \leq 1$	$0.90 \leq AGFI \leq 0.95$	0.87
SRMR	$SRMR \leq 0.05$	$0.05 \leq SRMR \leq 0.10$	0.06
NNFI	$0.95 \leq NNFI \leq 1$	$0.90 \leq NNFI \leq 0.95$	0.89
CFI	$0.95 \leq CFI \leq 1$	$0.90 \leq CFI \leq 0.95$	0.91
χ^2/sd	$\chi^2/sd \leq 3$	$3 < \chi^2/sd \leq 5$	1.95
p	$0.05 \leq p \leq 1$	$0.00 \leq p \leq 0.05$	0.00

When the results of fit criterion are compared, it is seen that the model is within acceptable fit limits. Statistical conformity of the model is tested with χ^2/sd and it is concluded that the calculated $\chi^2/sd=1.95 < 5$ ratio is compatible with the variance-covariance matrix main mass of the variance covariance matrix of the model. It can be said that the model is statistically significant as $p=0.00 < 0.05$. Other values of model fit indices were found to be as: RMSEA= .07, GFI= .91, AGFI= .87, SRMR= .06, NNFI= .89 and CFI= .91 ($p < .00$). Path analysis of the scale was conducted and the results are given in Figure 1.



Chi-Square=124.87, df=64, P-value=0.00001, RMSEA=0.070

Figure 1. Standard Values and Path Diagram

As is seen in Figure 1, the values that belong to the coefficients of observed variables in the model established for Forgiveness Scale are significant ($p=.00$). As a result the suggested model with 13 observed and 2 latent variables was found significant. In the diagram, it was determined that the values standardized values of which were indicated, are not over "1". No discordance (in-fit) was found between implicit and observed variables. In this case, the obtained values and factor loadings of the items indicate that model is acceptable.

Turkish Studies

International Periodical For the Languages, Literature and History of Turkish or Turkic
Volume 10/7 Spring 2015



Criterion-related Validity

In the study for criterion-related validity of the scale, “Tolerance Scale” (Ersanlı, 2014) together with “Forgiveness Scale” was applied to 84 students. It was found out that there is positive correlation between forgiveness and tolerance ($r = .56, p < .001$).

Results of Reliability Study

Internal consistency coefficient and split half reliability of the scale were calculated on the data received from 476 undergraduate students in total who were reached for validity and reliability analysis in the first ($n=197$), second ($n=195$) and third ($n=84$) study group. Internal consistency (Cronbach’s alpha) coefficient obtained as a result of this was .74. Internal consistency coefficient of first subscale which is called as “Forgiveness of Other” was .76; and internal consistency coefficient of second subscale which is called as “Forgiveness of Self” was .82. And the split half reliability coefficient was found as .71 for the first half, and .77 for the second half. These results indicate an adequate reliability for Forgiveness Scale.

Discussions and Suggestions

In this study it is aimed to develop a “Forgiveness Scale” to determine forgiveness levels of undergraduates. Following the exploratory and confirmatory factor analysis conducted for construct validity, it was found that the described variance ratio is 46,09%; and that the scale indicates acceptable fit as two dimensional. Further it was concluded that the scale is valid as a result of equivalent scale validity. When the results of reliability studies of Forgiveness Scale are considered, it is observed that Cronbach’s alpha and item-test correlation coefficients are within the acceptable matrix.

Forgiveness includes an individual’s forgiving himself (forgiveness of self) and one’s forgiving another individual (forgiveness of others) (Enright and Fitzgibbons, 2000). However; forgiveness has dimensions according to Thompson et al., (2005) such as “forgiveness of others”, forgiveness of self” and “forgiveness of situation” Although there are no items in this scale with respect to the dimension of “forgiveness of situation”, explained variance is remarkable. The first subscale called as “Forgiveness of Others” consists of 10 items; whereas the second subscale called as “Forgiveness of Self” consists of 3 items. The scale, consisting of 13 items in total, is a Likert-type format with response options ranging from 1 (minimum) to 7 (maximum). 1., 2., 3., 6., 7. and 8th items in the scale are reverse scored. The lowest point and the highest point to be taken from the scale are 13 and 91 respectively. Higher the scores obtained from the scale indicates higher level of forgiveness.

According to all these results, it can be said that Forgiveness Scale developed for Turkish Culture in order to determine forgiveness level of undergraduates is a valid and reliable scale.

This study was performed along with the data obtained from undergraduate students. Scale versions appropriate for all age groups could be developed thereby carrying out validity and reliability studies of the scale with different groups and age ranges. Since this scale is two dimensional as “forgiveness of others” and “forgiveness of self”, new studies can be conducted in order to gain “forgiveness of situation” dimension to the scale.

Turkish Studies

International Periodical For the Languages, Literature and History of Turkish or Turkic
Volume 10/7 Spring 2015



REFERENCES

- AL-MABUK, R., ENRİGH, R. D. & CARDİS, P. (1995). Forgiveness Education with Parentally Love-Deprived College Students. *Journal of Moral Education*, 24, 427-444.
- ALPAY, A. (2009). *Yakın İlişkilerde Bağışlama: Bağışlamanın; Bağlanma, Benlik Saygısı, Empati Ve Kıskançlık Değişkenleri Yönünden İncelenmesi*. Yüksek Lisans Tezi, Ankara Üniversitesi, Sosyal Bilimler Enstitüsü. Ankara.
- ANDREWS, M. (2000): Forgiveness in Context. *Journal of Moral Education*, 29, 75-86. DOI:10.1080/030572400102943
- BERRY, J. W., WORTHINGTON, E. L., Jr., PARROTT, L., O'CONNOR, L. E. & WADE, N. G. (2001). Dispositional Forgiveness: Development And Construct Validity of the Transgression Narrative Test of Forgiveness (TNTF). *Personality and Social Psychology Bulletin*, 27, 1277-1290. DOI:10.1177/01461672012710004
- BLOCHER W. & WADE, N.G. (2010). Sustained Effectiveness of Two Brief Group Interventions: Comparing an Explicit Forgiveness-Promoting Treatment with a Process-Oriented Treatment. *Journal of Mental Health Counseling*, 32(1), 58–74.
- BUGAY A. & DEMİR, A. (2010). A Turkish Version of Heartland Forgiveness Scale. *Procedia Social and Behavioral Sciences*, 5, 1927-1931.
- BUGAY, A. & DEMİR, A. (2011). Hataya İlişkin Özelliklerin Başkalarını Affetmeyi Yordaması. *Türk Psikolojik Danışma ve Rehberlik Dergisi*, 4 (35), 8-17.
- BUGAY, A. & DEMİR, A. (2012). Affetme Arttırılabilir mi? : Affetmeyi Geliştirme Grubu. *Türk Psikolojik Danışma ve Rehberlik Dergisi*, 4 (37), 96-106.
- BÜYÜKÖZTÜRK, Ş. (2009). *Sosyal Bilimler İçin Veri Analizi El Kitabı: İstatistik, Araştırma Deseni, SPSS Uygulamaları ve Yorum*. Ankara: Pegem Yayınları.
- BÜYÜKÖZTÜRK, Ş. (2011). *Veri Analizi El Kitabı*. Ankara: Pegem Akademi Yayıncılık.
- ÇARDAK, M. (2012). *Affedicilik Yönelimli Psiko-Eğitim Programının Affetme Eğilimi, Belirsizliğe Tahammülsüzlük, Psikolojik İyi Oluş, Sürekli Kaygı ve Öfke Üzerindeki Etkisinin İncelenmesi*. Yayınlanmamış Doktora Tezi, Sakarya Üniversitesi, Eğitim Bilimleri Enstitüsü, Sakarya.
- DROLL, D. M. (1984). *Forgiveness. Theory and Research*. Unpublished Doctorial Dissertation, University of Nevada, Reno.
- ELLIOTT, J. C. (2010). *Humility: Development and Analysis of a Scale*. Unpublished Doctorial Dissertation, University of Tennessee, Knoxville.
- ENRİGH, R.D. & FITZGIBBONS, R.P. (2000). *Helping Clients Forgive: An Empirical Guide for Resolving Anger and Restoring Hope*. Washington, DC: American Psychological Association.
- ENRİGH, R. D., FREEDMAN, S. & RİQUE, J. (1998). The Psychology of Interpersonal Forgiveness. In R. D. Enright& J. North (Eds.), *Exploring Forgiveness* (pp. 46-62) Madison, WI: University of Wisconsin Press.
- ENRİGH, R. D., RİQUE, J. & COYLE, C. (2000). *The Enright Forgiveness Inventory*. Madison, WI: International Forgiveness Institute.
- ENRİGH, R. D. & The Human Development Study Group (1996). Counseling Within The Forgiveness Triad: On Forgiving, Receiving Forgiveness And Self-Forgiveness. *Counseling and Values*, 40, 107-126. DOI:10.1002/j.2161-007X.1996.tb00844.x
- ERSANLI, E. (2014). The Validity and Reliability Study of Tolerance Scale, *Journal of Basic and Applied Scientific Research*, 4(1), 85-89.

Turkish Studies

International Periodical For the Languages, Literature and History of Turkish or Turkic
Volume 10/7 Spring 2015



- GRAHAM, V.N., ENRIGHT, R.D. & KLATT, J.S. (2012). An Educational Forgiveness Intervention for Young Adult Children of Divorce. *Journal of Divorce & Remarriage*, 53(8), 618-638. DOI:10.1080/10502556.2012.725347
- HALL, J. H. & FINCHAM, F. D. (2005). Self-Forgiveness: The Stepchild of Forgiveness Research. *Journal of Social and Clinical Psychology*, 24, 621-637. DOI:10.1521/jscp.2005.24.5.621
- HARGRAVE, T. D. & SELLS, J. N. (1997). The Development of a Forgiveness Scale. *Journal of Marital and Family Therapy*, 2, 41-62. DOI:10.1111/j.1752-0606.1997.tb00230.x
- HARRIS, A. H. S., LUSKIN, F., NORMAN, S. B., STANDARD, S., BRUNING, J., EVANS, S., et al. (2006). Effects of a Group Forgiveness Intervention on Forgiveness, Perceived Stress And Trait-Anger. *Journal of Clinical Psychology*, 62, 715-733. DOI:10.1002/jclp.20264
- HUI, E.K.P. & CHAU, T.S. (2009). The Impact of a Forgiveness Intervention with Hong Kong Chinese Children Hurt in Interpersonal Relationships. *British Journal of Guidance & Counselling*, 37(2), 141-156. DOI:10.1080/03069880902728572
- INGERSOLL-DAYTON, B., CAMPBELL, R. & JUNG-HWA, H. (2008). Enhancing Forgiveness: A Group Intervention for the Elderly. *Journal of Gerontological Social Work*, 52:1, 2-16. DOI:10.1080/01634370802561901
- KAMAT, V. I., JONES, W. H. & ROW, K.L. (2006). Assessing Forgiving as A Dimension of Personality. *Individual Difference Research*, 4, 322-330.
- LUSKIN, F. (2002). *Forgive For Good: A Proven Prescription for Health and Happiness*. Harper: San Francisco.
- MADSEN, S. R., GYGI, J., HAMMOND, S. C. & PLOWMAN, S. F. (2009): Forgiveness as a Workplace Intervention: The Literature and a Proposed Framework. *Journal of Behavioral and Applied Management*, 10(2), 246-262.
- MAUGER, P.A., PERRY, J.E., FREEMAN, T., GROVE, D.C., MCBRIDE, A.G. & MCKINNEY, K. E. (1992) The Measurement of Forgiveness: Preliminary Research. *Journal of Psychology and Christianity*, 11, 170-180.
- MCCULLOUGH, M.E. & HOYT, W.T., (2002). Transgression-Related Motivational Dispositions: Personality Substrates of Forgiveness and Their Links to the Big Five. *Society for Personality and Social Psychology*. 28(11), 1556- 1572. DOI:10.1177/014616702237583
- MCCULLOUGH, M. E., PARGAMENT, K. I. & THORESEN, C. E. (2000). *Forgiveness: Theory, Research And Practice*. New York: Guilford.
- MCCULLOUGH M.E. & WORTHINGTON E.L. (1995). Promoting Forgiveness: The Comparison of Two Brief Psychoeducational Interventions with a Waiting-List Control. *Counseling and Values*, 40(1), 55-68. DOI:10.1002/j.2161-007X.1995.tb00387.x
- MCCULLOUGH, M. E., WORTHINGTON, E. L. & RACHAL, K. (1998). Interpersonal Forgiving in Close Relationships: II. Theoretical Elaboration and Measurement. *Journal of Personality and Social Psychology*, 75, 1586-1603. DOI:10.1037/0022-3514.75.6.1586
- RYE, M. S., LOIACONO, D. M., FOLCK, C. D., OLSZEWSKI, B. T., HEIM, T. A. & MADIA, B. P. (2001). Evaluation of The Psychometric Properties of Two Forgiveness Scales. *Current Psychology*, 20, 260-277. DOI:10.1007/s12144-001-1011-6
- SARIÇAM, H. & AKIN, A. (2013). Affedicilik Ölçeğinin Türkçe Uyarlaması: Geçerlik Ve Güvenirlik Çalışması. *Hasan Ali Yücel Eğitim Fakültesi Dergisi*, 19, 37-46

Turkish Studies

International Periodical For the Languages, Literature and History of Turkish or Turkic
Volume 10/7 Spring 2015



- SARIÇAM, H., AKIN, A., GEDİKSİZ, E. & AKIN, U. (2012). Alçakgönüllülük Ölçeğinin Türkçe Formu: Geçerlik ve Güvenirlik Çalışması. *Kalem Eğitim ve İnsan Bilimleri Dergisi*, 2(2), 165-188.
- SANDAGE, S. J. & WORTHINGTON, E. L. (2010). Comparison of Two Group Interventions to Promote Forgiveness: Empathy as a Mediator of Change. *Journal of Mental Health Counseling*, 32, 35-57.
- SCOBIE, E.D. & SCOBIE, G.E.W. (1998). Damaging Events: The Perceived Need for Forgiveness. *Journal of the Theory of Social Behaviour*, 28, 373-400. DOI:10.1111/1468-5914.00081
- SÜMER, N. (2000). Yapısal Eşitlik Modelleri: Temel Kavramlar Ve Örnek Uygulamalar. *Türk Psikoloji Yazıları*, 3(6), 49-74.
- ŞİMŞEK, Ö. F. (2007). *Yapısal Eşitlik Modellemesine Giriş: Temel İlkeler ve Lisrel Uygulamaları*. Ekinoks Yayınları, Ankara.
- TAYSİ, E. (2007). *İkili İlişkilerde Bağışlama: İlişki Kalitesi Ve Yüklemelerin Rolü*. Yayınlanmamış Doktora Tezi, Ankara Üniversitesi, Ankara.
- THOMPSON, L. Y., SNYDER, C. R., HOFFMAN, L., MICHAEL, S. T., RASMUSSEN, H. N. and BILLINGS, L. S. (2005). Dispositional Forgiveness of Self, Others, and Situations. *Journal of Personality*, 73, 313-359.
- WADE, S. G. (1989). *The Development of a Scale to Measure Forgiveness*. Unpublished Doctoral Dissertation. Fuller Graduate School Of Psychology, Pasadena, CA.
- WADE, N. G. & WORTHINGTON, E. L. (2005). In Search of a Common Core: A Content Analysis of Interventions to Promote Forgiveness. *Psychotherapy: Theory, Research, Practice, Training*, 42(2), 160-177. DOI:10.1037/0033-3204.42.2.160
- WORTHINGTON, E. L. (1998). An Empathy-Humility-Commitment Model of Forgiveness Applied Within Family Dyads. *Journal of Family Therapy*, 20, 59-76. DOI:10.1111/1467-6427.00068
- WORTHINGTON, E. L., KURUSU, T. A., COLLINS, W., BERRY, J.W., RIPLEY, J. S. & BAIER, S. N. (2000). Forgiving Usually Takes Time: A Lesson Learned by Studying Interventions to Promote Forgiveness. *Journal of Psychology and Theology*, 28, 3-20.
- WORTHINGTON, E. L. & WADE, N. G. (1999). The Social Psychology of Unforgiveness and Forgiveness and Implications for Clinical Practice. *Journal of Social and Clinical Psychology*, 18, 385-418. DOI:10.1521/jscp.1999.18.4.385
- YILDIRIM, A. (2009). Bağlanma Stilleri İle Bağışlama Arasındaki İlişkide Sorumluluk Yüklemelerinin Aracı Rolü. Yüksek Lisans Tezi, Hacettepe Üniversitesi, Sosyal Bilimler Enstitüsü, Ankara.
- YILMAZ, V. & ÇELİK, H. E. (2009). *Lisrel ile Yapısal Eşitlik Modellemesi-I: Temel Kavramlar, Uygulamalar, Programlama*. Pegem Akademi Yayınları, Ankara.

Citation Information/Kaynakça Bilgisi

ERSANLI, K., VURAL BATIK, M., Development Of The Forgiveness Scale: A Study Of Reliability And Validity, *Turkish Studies - International Periodical for the Languages, Literature and History of Turkish or Turkic* Volume 10/7 Spring 2015, p. 19-32, ISSN: 1308-2140, www.turkishstudies.net, DOI Number: http://dx.doi.org/10.7827/TurkishStudies.8201, ANKARA-TURKE

Turkish Studies

International Periodical For the Languages, Literature and History of Turkish or Turkic
Volume 10/7 Spring 2015

