Investigation of the Effect of Intolerance of Uncertainty and the effect of Anger Control on the Relationship between Forgiveness and Psychological Well-Being through Structural Equation Modelling

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Abstract

The principal aim of this study is to test whether interaction of tendency to forgiveness, intolerance of uncertainty and anger expression has a significant effect on Psychological well-being. The study was carried out on 912 people, 478 females and 434 males, who study in Sakarya University Faculty of Education. In selection of individuals to be accepted in the sample, proportional sampling and random sampling methods were used. The data in the study were collected with Heartland Forgiveness Scale, Scale of Psychological Well-being, State Continuous Anger scale and Intolerance of Uncertainty Questionnaire. Analysis was made by using Structural Equation Modelling. As a result of the research, it was found that a- As tendency to forgiveness increases, Psychological well-being also does, b- As tendency to forgiveness increases, Intolerance of uncertainty decreases, however, it was found that it has no mediating effect on Psychological well-being, c- Increase of tendency to forgiveness also increases anger control level and it was found that this mediates the effect of tendency to forgiveness on Psychological well-being.

Keywords: Forgiving, uncertainty, intolerance of uncertainty, anger, anger control, psychological well-being

Affedicilik ve Psikolojik İyi Oluş Arasındaki İlişkiye Belirsizliğe Tahammülsüzlük ve Öfke Kontrolünün Aracılık Etkisi

Öz

Bu çalışmanın temel amacı, affedicilik eğilimi, belirsizliğe tahammülsüzlük ve öfke ifade tarzı etkileşiminin Psikolojik iyi oluş üzerinde anlamlı bir etkiye sahip olup olmadığı test etmektir. Çalışma Sakarya Üniversitesi Eğitim Fakültesinde öğrenim gören 478 kız 434 erkek olmak üzere toplam 912 kişi ile gerçekleştirilmiştir. Örnekleme alınacak bireylerin seçilmesinde oranlı

Anahtar Kelimeler: Affetme, belirsizlik, belirsizliğe tahammülsüzlük, öfke, öfke kontrolü, psikolojik iyi oluş

1. INTRODUCTION
Forgiveness usually refers to releasing resentment toward an offender (Hargrave, 1994) restoring relationships and healing inner emotional wounds (DiBlasio & Proctor, 1993) or a strong feeling of displeasure and antagonism aroused by a sense of injury or wrong (Fitzgibbons, 1986). According to Piderman (n.d.) forgiveness is a decision to let go of resentments and thoughts of revenge. Enright and Coyle (1988) agrees with forgiving definitions with this statement: ‘A real forgiveness is that a person who suffered because of experiencing a pain s/he does not deserve gives up the right to punish or revenge and s/he show mercy to the guilty person instead of feelings such as revenge or anger.’

Intolerance of uncertainty is defined as emotional, cognitive, and behavioral reactions to ambiguous situations (Buhr & Dugas, 2002). Uncertainty may reveal itself because of three reasons. First one is that there may be a new situation without any clue; second one is that there may be a complex situation with many clues; third one is that there may be a conflicting situation where different clues present different information. In other words, an uncertain situation may be new, complex or conflicting, unsolvable. If the reactions given to a situation perceived as threat are divided into two groups, one will come up as obedience and the other one as denial. In obedience, the person believes that s/he cannot change the reality and accepts it. In denial, the reality is changed depending on the perceiving person. If these two approaches appear in a new, complicated or unsolvable situation, it can be said that the person is intolerant to uncertainty (Budner, 1962).

Ongoing studies on psychology focused on the imbalances -depression, fear, etc.- experienced by people instead of good moods. Martin Seligman started a new and developing scientific movement called ‘positive psychology’ on happiness, peace and positive human behaviors (Goleman, 2005). The construct of psychological well-being refers to perceived thriving in comparison with the existential challenges of life, such as the pursuit of meaning, the development as a human being, and the quality of one’s connection to others (Keyes et al., 2002). The aim of positive psychology is to ensure that psychology, as a branch of science, is not only concerned with fixing the disorders but also to be directed to positive qualities (Seligman & Csikszentmihalyi, 2000).

Anger is defined as a quite intensive, negative emotion which is felt in situations such as being prevented, attacked, threatened, bereft, restricted, etc. and which may result in aggressive behaviors towards the causing thing or person by some means or other (Budak, 2000). Biaggio (1989) defines anger as a strong emotion which is related with the cognitions which occur against any real or assumed prevention, threat or injustice and which directs the person to eliminate the disturbing stimuli for the individual.

1.1 Relationship between Variables
Forgiving causes a psychological relief for the individual. It has an effect on and helps happiness and psychological well-being of the person. In forgiving, some personality facts are at the forefront. Hence, some people can be forgiving while some cannot, depending on these personality traits. While some people are over-forgiving, the reason why feeling of revenge, which is the opposite, is often seen in some people is that these personality traits show difference depending on the person (Bugay & Demir, 2011).
In a research of Toussaint and Friedman (2009), results showed that forgiveness and gratitude were both positively and strongly associated with well-being and largely, though not completely, mediated by affect and belief. Forgiveness and gratitude may have an important place in the positive psychologist’s repertoire of well-being enhancing techniques and exercises in general, and may be particularly powerful with a clinical psychotherapy population.

Some of the studies remark that individuals who committed the offense perceive that the offense is not so great or the person who is psychologically hurt perceives the situation differently or exaggerates the offense because of his/her anger. In their studies Zechmeister and Romero (2002) obtained results supporting these statements. Most of the guilty people in the study stated that their guilt was actually minor and they did not deserve the anger of the victim. Fincham, Hall and Beach (2005) focused on the violence concept of guilt in their studies. In this study, the individual attributions made by the person about the harm were examined. The hurt person tends to make negative attributions about the harm done. This makes it harder for the individual to forgive the guilty person since it increases his/her anger.

Regarding variables such as forgiveness, reaction and health, in a study named ‘Role of Anger’ (Lawler-Row, Karremans, Scott, Edlis-Matityahou & Edwards, 2008), it was examined whether the decrease in anger level of the individual had a positive effect on the forgiveness level. Condition of forgiveness is related with average heart beat rate. Continuous forgiveness is clearly related with less drug and alcohol use, lower blood pressure and pressure generation rate; situational forgiveness is significantly related with lower heart beat rate and less physical symptoms. These findings have important theoretical implications about forgiveness-health association; in addition, the obtained findings support that benefits of forgiveness expand beyond anger distribution (Lawler-Row et al., 2008).

In a study, Karremans, Van Lange, Ouwerkerk and Kluwer (2003) examined the concepts affecting forgiveness and resulting facts after forgiveness behavior. In this study, the relationship of forgiveness with psychological well-being was emphasized. In the study, it was proved that forgiveness results in psychological well-being.

1.2 Aim of the Study and Hypotheses

This model aims to determine through which variables the relationship between tendency of forgiveness and psychological well-being is realized. In other words, the aim of this study is to try to explain how the tendency to forgiveness causes or contributes to psychological well-being. In this context, basic relationship pattern aimed to be explained in the model is given in figure 1.

![Figure 1. Model of Mediating Effect of Anger Control and Intolerance of Uncertainty on the Relationship between Tendency to Forgiveness and Psychological Well-Being (Hypothetical model)](image)
In this model, it was stated that intolerance of uncertainty and anger control variables are thought to mediate the relationship between tendency to forgiveness and psychological well-being and findings supporting this opinion were included. The researchers included studies proving the relationship of forgiving with intolerance to uncertainty and anger control variables (1st and 2nd paths), in addition relationship of psychological well-being with intolerance of uncertainty and anger control (3rd and 4th paths) to support this model.

According to this model, it can be said that psychological well-beings of people depend on their anger controls and levels of intolerance of uncertainty.

The observable variables of four latent variables (tendency to forgiveness, anger control, intolerance of uncertainty and psychological well-being) in this model were defined using the scores obtained from the sub-dimensions of scales. Accordingly, latent variable of forgiveness is represented by observable variables of forgiving oneself, forgiving others and forgiving the situation. Latent variable of anger control is represented by observable variables of anger-in, anger-out and anger control. Latent variable of intolerance of uncertainty is represented by observable variables of uncertainty is stressful, negative self-assessment regarding uncertainty, disturbing thoughts about the uncertainty of future and uncertainty keeps me from acting. Psychological well-being is represented by observable variables of positive relations with others, autonomy, environmental mastery, personal growth, purpose in life and self-acceptance.

2. METHOD
2.1 Sample
The sample of the research consists of 912 students studying in different departments of Sakarya University Faculty of Education in 2011-2012 education years. Proportional sampling method was used due to the fact that number of students in departments and grades are different and random sampling method was used in selecting the students determined from departments. Accordingly, the study was performed with 912 people, 434 males and 478 females. 48% of the participants are male and 52% are female, their ages vary between 18-23 and age average is 21.

2.2 Data Collecting Instruments

2.2.1 Heartland Forgiveness Scale
In order to measure the self-forgiveness levels of university students in the scale, 7-point Likert type and 18-item Heartland Forgiveness scale which was developed by Thompson and Thompson, Snyder, Hoffman, Michael, Rasmussen and Billings (2005) and which was adapted into Turkish by Bugay and Demir (2010) was used. The scale has three sub-dimensions which are forgiving oneself, others and forgiving the situation. As a result of validity and reliability studies of the scale, test-retest coefficient was calculated .83 for forgiving oneself, .72 for forgiving others and .73 for forgiving the situation sub-dimension and .77 for total score. Cronbach's α coefficients were reported as .75, .78, .79 respectfully and .86 for total score (Thompson et al., 2005).

2.2.2 Intolerance of Uncertainty Questionnaire
Intolerance of Uncertainty Questionnaire consists of 27 items that assesses emotional, cognitive and behavioral reactions to ambiguous situations, implications of being uncertain, and attempts to control the future (Freeston, 1994). The scale was adopted English by Buhr & Dugas (2002). The scale consists of four factors: (1) Uncertainty is stressful and upsetting, (2) Negative self-assessment about uncertainty, (3) Disturbing thoughts about the uncertainty of future, (4) Uncertainty keeps me from acting. Turkish adaptation of scale was made by Sarı (2007). Internal consistency of scale was found .93.

2.2.3 Scale of Psychological Well-being (PWB)
Scale of Psychological Well-Being was developed by Ryff (1989) to assess the psychological well-being of the individual. The scale was adapted into Turkish by Cenkseven (2004). It is seen that the correlations vary between .25 and .57 with
the total score obtained from 84-item Scale of Psychological Well-Being. Sub-dimensions of the scale are positive relations with others, autonomy, environmental mastery, personal growth, purpose in life and self-acceptance. Internal consistency coefficients (Cronbach’s Alpha) of the scale were found as .83 for positive relations with other, .78 for autonomy, .77 for environmental mastery, .74 for personal growth, .76 for purpose in life and .79 for self-acceptance. Total internal consistency coefficient of the Scale of Psychological Well-being was calculated as .93. Correlation coefficients for test-retest reliability were found as .74 for positive relations with other, .77 for autonomy, .77 for environmental mastery, .74 for personal growth, .75 for purpose in life and .76 for self-acceptance. In addition test-retest correlation coefficient for total score was stated to be .84 (Cenkseven, 2004).

State continuous anger scale. The scale which was developed by C.D. Spielberger in 1983. includes 44 points. 10 of the points measure anger, 10 of them measure state anger and 24 of them measure anger expression style. Subscales of expression style scale: Restrained anger, expressed anger and repressed anger (Savaşır & Şahin, 1997). The scale was adapted in Turkish by Özer (1994) and cronbach’s alpha values were found as .84 for ‘anger control’ dimension, .78 for ‘anger-in’ dimension and .62 for ‘anger-out’ dimension.

2.3 Statistical Analysis

In order to assess the findings obtained in the study, structural equation models which have become increasingly important in the recent psychological studies were used. Structural equation analysis includes two interrelated stages: First stage is to examine the measuring model which shows the relationships between observable variables and latent variables. Second stage is to examine the structural model where the relationships between different latent variables are put forth. As a result, the coherence of the obtained model and data is evaluated according to some fit indices. Statistical analysis were made by using SPSS 20.0 and Lisrel 8.80.

3. FINDINGS

This model aims to determine through which variables the relationship between tendency of forgiveness and psychological well-being is realized. In other words, the aim of this study is to try to explain how the tendency to forgiveness causes or contributes to psychological well-being. Fit indices of mediating effect of anger control and intolerance of uncertainty variables on the relationship between tendency to forgiveness and psychological well-being are given in table 1.

<p>| Table 1. Fit Indices of Mediating Effect of Anger Control and Intolerance of Uncertainty on the Relationship between Tendency to Forgiveness and Psychological Well-Being |</p>
<table>
<thead>
<tr>
<th>Fit test</th>
<th>Value</th>
<th>Good fit</th>
<th>Sufficient Fit</th>
</tr>
</thead>
<tbody>
<tr>
<td>(X^2/df)</td>
<td>1.90</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>RMSA</td>
<td>.075</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>NNFI</td>
<td>.94</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>NFI</td>
<td>.98</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>CFI</td>
<td>.99</td>
<td>✓</td>
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<tr>
<td>IFI</td>
<td>.99</td>
<td>✓</td>
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<tr>
<td>RFI</td>
<td>.89</td>
<td>✓</td>
<td></td>
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<tr>
<td>AGFI</td>
<td>.94</td>
<td>✓</td>
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<tr>
<td>GFI</td>
<td>.99</td>
<td>✓</td>
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</tbody>
</table>

When the fit indices of mediating effect of anger control and intolerance of uncertainty on tendency to forgiveness and psychological well-being are analyzed, it is seen that the results are good fit. These results indicate that the model formed to test the mediating effect of anger
Control and intolerance of uncertainty on tendencies to forgiveness and psychological well-being works in good fit level. These results are important in that the finding obtained as a result of the model is reliable and usable.

**Figure 2. Mediating Effect of Anger Control and Intolerance of Uncertainty Variances on the Relationship between Tendency to Forgiveness and Psychological Well-Being**

When Figure 2 is analyzed, regarding the relationship between forgiveness and intolerance of uncertainty (r= -.35), it is seen that as tendency to forgiveness increases, intolerance of uncertainty decreases. Regarding the relationship between forgiveness and anger control (r= .32), as tendency to forgiveness increases, anger control level also does. It is seen that the third path formed in the study between intolerance of uncertainty and psychological well-being does not work (r=.04). In this stage, third path is removed from the model and the model for mediating effect of anger control and intolerance of uncertainty on tendency to forgiveness and psychological well-being is given in figure 3.

**Figure 3. Mediating Effect of Anger Control on the Relationship between Tendency to Forgiveness and Psychological Well-Being in case of removal of intolerance of uncertainty variable.**

When Figure 3 is analyzed it is seen that fit indices are RMSEA=.029, X²/df=1.13, NFI=.98, NNFI=.99, CFI=1.00, IFI=1.00, RFI=.93, GFI=.99 and AGFI=.97 if third path is removed. It is seen that these fit indices are better that fit indices obtained in the model with first, second, third and fourth path. This result indicates that proper extroversion of anger and therefore anger control
has a mediating effect, but not intolerance of uncertainty on tendency to forgiveness and psychological well-being. Because forgiving requires accepting the anger, not harming oneself and others, thinking of resources, understanding the wrong behaviors and the underlying reasons of the person who does them, being empathic and giving time to oneself. Given that psychological well-being is a process, it can be said that this result is significant.

4. CONCLUSION AND DISCUSSION

4.1 As tendency to forgiveness increases, psychological well-being also does

There is a positive high relationship between tendency to forgiveness and psychological well-being. Forgiveness is an important factor contributing to accepting the experienced situations, making the associations with self in an objective way, accepting self as it is and completing the unfinished business. All these factors are elements which contribute to individual's developing positive feelings for others and his/her future. Feelings are essential elements of assessing the psychological conditions of people. Feelings are messengers telling us how our spirit is. We can pay attention to our feelings to understand how our spirit is (Navaro, 2000). These feelings contribute to individual's developing forgiving behaviors in a decided and consistent way. Because this process requires an attempt and psychological well-being is defined as challenging, making an effort, personal development and trying to grow up (Waterman, 1993). Tendency to forgiveness serves as a basic factor increasing self-acceptance level. The criterion which repeats itself clearly for well-being is feeling of self-acceptance. This is identified as a central feature in the mental health such as self-realization, functioning optimum and maturity. Life-long development theories emphasize the importance of acceptance of self and past. Therefore, the main feature of positive psychological function is individual's determining positive attributes for himself/herself (Ryff, 1989).

4.2 As tendency to forgiveness increases, intolerance of uncertainty decreases

Uncertainty may reveal itself because of three reasons. First one is that there may be a new situation without any clue; second one is that there may be a complex situation with many clues; third one is that there may be a conflicting situation where different clues present different information. In other words, an uncertain situation may be new, complex or conflicting, unsolvable. If the reactions given to a situation perceived as threat are divided into two groups, one will come up as obedience and the other one as denial. In obedience, the person believes that s/he cannot change the reality and accepts it. In denial, the reality is changed depending on the perceiving person. If these two approaches appear in a new, complicated or unsolvable situation, it can be said that the person is intolerant to uncertainty (Budner, 1962). It was found that fear of uncertainty is more effective on concern and depression rather than anxiety and more fear of uncertainty results in more severe concern and depression. It was understood that concern impacts anxiety, however there is no opposite relationship and anxiety and concern are different structures. As a result of these studies on concern, there are different variables regarding the etiology of concern. Intolerance to uncertainty, which is one of these variables, is known to play a principal role on the development and maintenance of concern (Dugas, Freeston & Ladouceur, 1997).

4.3 Increase of tendency to forgiveness also increases anger control level

Anger is a natural and human feeling which should be experienced. It is not important not to feel this feeling, but to manage this feeling without the feeling managing the person. Tendency to forgiving helps the person to express his/her anger in a proper way. Especially forgiving oneself is very important issue. Someone who can forgive oneself can accept oneself as s/he is. Self-acceptance is an important element of being able to control oneself. All cognitive, emotional and behavioral competences
help the person to express a strong feeling such as anger without harming self or others. It was seen that intolerance to uncertainty has no mediating effect on the relationship between forgiveness and Psychological well-being. Increase of tendency to forgive decreases intolerance to uncertainty; however it was found that it has no mediating effect on the relationship between forgiveness and psychological well-being. Tendency to forgiveness also increases anger control level. It was found that anger control has a mediating effect on the relationship between tendency to forgiveness and psychological well-being. It can be said that mediating effect of anger control on the relationship between tendency to forgive and psychological well-being helps the individual to express feeling of anger without harming oneself or others and as a result, it provides both internal and external harmony of the individual. Anger control may start a process which may result in experiencing positive feelings in the individual. It can be said that positive effect of tendency to forgiveness on anger control and positive effect of anger control on psychological well-being is a condition that increases the feeling of hope of the individual. Dealing with or fighting fear or similar negative feelings is dependent on this feeling of hope. Real forgiving means that the individual believes s/he has anger control and psychological well-being. According to the model examined in research, it can be said that experiencing this feeling occurs as a result of process starting with tendency to forgive, continuing with anger control and ending with psychological well-being.

4.4 Suggestions

- During the psychological counseling, anger control may be emphasized while working out with forgiving for increasing psychological well-being.
- Studies can be made for other proper variables which may have a mediating effect between Forgiveness and Psychological Well-being.

References


