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Research Article

# The Relationship Between Psychological Hardiness and Mindfulness in University Students: The Role of Spiritual Well-Being

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## Abstract

The purpose of the research is to reveal the role of spiritual well-being in relationship between psychological hardiness and mindfulness in university students. The sample of the research consisted of a total of 561 university students with convenience sampling strategy who were between 17-49 years of age and were studying in Konya 2017 and 2018. The research is done in accord with relational scanning which is a subgenre of general survey model. In this research structural equation modeling analysis has been applied to test the relationships among psychological hardiness, mindfulness and spiritual well-being variables of university students. Structural equation modeling analysis has been carried out using AMOS 19 software. In the study, 'Demographic Information Form', 'The Psychological Hardiness Scale', 'Five Facets Mindfulness Questionnaire' and 'Spiritual Well-Being Scale' were used. According to the findings obtained from the research, the major independent variable which affects the psychological hardiness of university students was mindfulness. A significant positive correlation was found between mindfulness levels and psychological hardiness levels. It is also observed that there is a positive linear correlation between spiritual well-being and psychological hardiness and mindfulness.

## Keywords:

Psychological Hardiness • Mindfulness • Spiritual Well-Being

## Üniversite Öğrencilerinde Psikolojik Dayanıklılık ve Bilinçli Farkındalık Arasındaki İlişki: Manevi İyi Oluşun Rolü

### Öz

Bu araştırmanın amacı, üniversite öğrencilerinde psikolojik dayanıklılık ve bilinçli farkındalık arasındaki ilişkide manevi iyi oluşun rolünü ortaya koymaktır. Araştırma, genel tarama modelinin bir alt türü olan ilişkisel tarama modeline göre gerçekleştirilmiştir. Araştırmanın örneklemini, 2017-2018 yılı içerisinde Konya ilinde öğrenim gören uygun örnekleme yöntemiyle seçilmiş, 17-49 yaş aralığında olan 561 üniversite öğrencileri oluşturmaktadır. Araştırmada üniversite öğrencilerinin psikolojik dayanıklılık, bilinçli farkındalık ve manevi iyi oluş değişkenleri arasındaki ilişkinin sınanması amacı ile yapısal eşitlik modellemesi analizi yapılmıştır. Yapısal eşitlik modellemesi analizi AMOS 19 Programı ile gerçekleştirilmiştir. Araştırmada 'Demografik Veri Toplama Formu', 'Psikolojik Dayanıklılık Ölçeği', 'Beş Boyutlu Bilinçli Farkındalık Ölçeği' ve 'Manevi İyi Oluş Ölçeği' kullanılmıştır. Araştırmadan elde edilen bulgulara göre üniversite öğrencilerinde psikolojik dayanıklılığı etkileyen en önemli bağımsız değişkenin bilinçli farkındalık değişkeni olduğu bilgisine ulaşılmıştır. Bilinçli farkındalık düzeyleri ile psikolojik dayanıklılık düzeyleri arasında pozitif yönlü anlamlı ilişki bulunmuştur. Ayrıca manevi iyi oluş ile psikolojik dayanıklılık ve bilinçli farkındalık arasındaki pozitif yönlü doğrusal bir ilişki olduğu görülmektedir.

### Anahtar Kelimeler:

Psikolojik Dayanıklılık • Bilinçli Farkındalık • Manevi İyi Oluş.

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As a socio-cultural creature, human beings coalesce into their natural environment in which they supply their needs and the social environment in which they develop their personalities. In order to be healthy and harmonious, both their physical needs such as eating, drinking, dressing and social and psychological needs of feeling like belonging to the society and being approved by others must be met (Terzi, 2005). People may find it difficult to adapt to the changes in their environments or may face various stressful situations during this process. Some may be able to get through more easily, while others may find it more challenging. The difference between the responses to stress prompted researchers to examine the distinctive aspects of people who are more adaptive (Aydoğdu, 2013). Some people even in the face of difficulties can continue their lives. Psychological hardiness is one of the distinguishing features of these people (Terzi, 2008).

Psychological hardiness is described as personality style or pattern associated with continued good health and performance under stress (Kobasa, 1979). There are existential approaches that define hardiness as a combination of emotional or cognitive attitudes and behaviors required not for survival but to enrich life throughout human development (Maddi, 2002). Psychological hardiness consists of interrelated three dimensions (Kobasa, 1979), one of which is self-dedication, explained as being interested in various areas of life and evaluating their work as worth the effort. The relationship between the person's family, work, and social environment, interpersonal relationships, values and beliefs, covers all areas of his life and thus provides sources needed to cope with stressful situations (Kobasa, Maddi & Kahn, 1982). The control dimension involves struggling to have an impact on the outcomes instead of being passive and weak (Maddi, 2006) which leads them to think that they can adjust the stress triggering situation (Gençöz & Motan, 2009). In the challenge dimension, people believe that their experiences should be considered as an opportunity for development and progress (Kobasa, 1979). Challenge is part of daily life, instead of a menace, it is considered as something promoting development (Maddi, 2002). Psychologically hardy people promote their well-being by using effective coping strategies in the face of stressful events (Terzi, 2005). It was discovered that psychological hardiness is related to depression and anxiety (Manning, Williams & Wolfe, 1988; Motan, 2002); stress (Westman, 1990); coping (Delahajj, Gaillard & Dam, 2010); work satisfaction and social support (Maddi, Kahn & Maddi, 1998).

Mindfulness, which is another variable of this research, has been used in psychotherapy in the West for nearly thirty years, and it has been recognized and investigated increasingly in our country in the last decade. (Kımay, 2013). Mindfulness is based on the 2,500 year Buddhist meditation practice as its origin. Although the first practices of mindfulness belong to Eastern philosophy, it is independent of any ideology or religion (Çelikler, 2017). Mindfulness is the process of focusing to



situations that are occurring on the present moment (Kabat-Zinn, 1994), a state of accepting and experiencing them rehashing the past or imagining the future (Bishop et al., 2004). Baer (2003) defined mindfulness as nonjudgmental observations of the ongoing stream of internal and external stimuli as they arise. When dealing with difficult physical or emotional situations, being nonjudgmental increases mindfulness, enabling us to see the situation as it is (Germer, 2005).

Mindfulness is the state of being conscious or aware of present moment, but most people can't achieve it. Thus, mindlessness arises (Özyeşil, 2011), in which one's refuse to recognize or pay attention to an object of emotion, thought, intention or perception (Brown & Ryan, 2003). Mindfulness, on the other hand, gathers attention to the present, instead of past or future. Such ability to direct attention increases one's energy, provides a clear vision and can also be developed by anyone (Germer, 2004).

Mindfulness is a technique that profoundly changes our relationship with our thoughts and emotions. An effort to observe what is going on, by focusing on one's internal experience, without appraisal, judgment and impartiality. For example, one can figure out that he/she is experiencing depression rather than being depressed, and he/she can objectively note the moments when he is actually free from grief or pain, rather than experiencing constant and inevitable grief. Therefore mindfulness has become increasingly popular in the therapist's toolbox as a valuable contribution to therapy (Morales Knight, 2010).

Bishop, et al. (2004) stated that mindfulness consists of two components. The first is the self-regulation of attention, which means sustaining attention on the experience to recognize the events in the mind, and the second is the orientation of the concepts of acceptance, openness and curiosity experienced during the instant experience. Shapiro et al. (2006) considered mindfulness in three dimensions: attitude, intention and attention. Attitude includes acceptance, impartiality and observation in current situation. Intention is the decision to focus on the present moment, and attention is the conscious orientation of the mind's effort to understand only the situation that occurs at that moment. As mindfulness improves, one can learn not to respond to the events in the same way as before and not to judge them. Instead, he/she can choose to experience the present moment and act accordingly what the moment requires. By means of mindfulness, in experiencing unpleasant feelings, instead of eliminating, suppressing, avoiding and judging one prefers to think clearly with an attitude including compassion and acceptance (Çelikler, 2017).

Mindfulness was first applied in therapy by John Kabat-Zinn in 1979 as Mindfulness-Based Stress Reduction (MBSR) program. In this program, mindfulness is taught as a skill to chronic pain patients to reduce symptoms and chronic disease-based stress (Kınay, 2013). Mindfulness-based therapies are practiced to solve many psychological

problems such as stress and depression (Shapiro, Schwartz & Bonner, 1998), anxiety disorders (Miller, Fletcher & Kabat-Zinn, 1995); Goldin and Gross, 2010), eating disorders (Lavender, Gratz & Tull, 2011), social anxiety (Rasmussen & Pidgeon, 2011).

Spiritual well-being is another concept examined in relation to psychological hardiness and mindfulness. People's views about the world and the goals that they try to to achieve are different. While some people value material assets, others attach special importance to faith and spiritual values. For people with these values, spirituality is essential for the protection of mental health (Kardas, 2017). Besides its definition of "intangible, spiritual things", spirituality is also defined as "heart power, morale" (TDK, 2019). The difference indicates that the spirituality is a multidimensional and multifaceted concept (Düzgüner, 2013). It can be said that spirituality is the seek for meaning, unity, devotion, love and the highest human potential (Pargament, 1999). In addition, spirituality is a result of life-long knowledge and includes elements that constitute the purpose of a person's life and that are meaningful to the person (Çetinkaya, Altundağ & Azak, 2007). Although spirituality and religion are used in the same sense from time to time, they are different from each other. Religion is an institutional structure with certain rules, stipulating submission as a condition, and goes along with the basis of learning and teaching (Coyle, 2008). On the other hand, spirituality is an extensive component of religion, so cannot be confined to religious belief alone. Spirituality is not only a matter of religious people, but people who do not have religious belief can have spiritual values (Kızıllırmak, 2015). The spiritual well-being involves processes such as questioning the purpose of life and realizing the connections to greater powers (Korkut Owen & Owen, 2012).

The concept of spiritual well being was expressed for the first time in the United States at a conference about aging (White House conference on Aging) in 1971. Spiritual well being is the willingness to seek the meaning and purpose of a person's existence, the questioning of everything, the understanding of abstract things that cannot be explained and not easily understood (Opatz, 1986). Hawks, et al. (1995) defines spiritual well being as communicating with people, having purpose in life, believing and connecting a supreme power. There are two sub-dimensions of spiritual well being. While religious well-being shows the relationship with a superior power, existential well-being includes psychosocial elements. It includes feelings about who the person is, what he or she does, and where he or she belongs. Both religious and existential well-being include dimensional supremacy and the movement beyond itself (Ellison, 1983). Spiritual well being is related to physical, psychological and social well being (Lou, 2015). Spiritual well-being has a role in the reduction of physical disorders and mental illness (George et al., 2000). In addition, a significant relationship was found between spiritual well-being and stress (Calicchia & Graham, 2006); anxiety (Kaczorowski, 1989); depression (Dunn and Shelton, 2007); life satisfaction (Dami, Tamon & Alexander, 2018).

In this study, it is aimed to reveal the mediating effect of spiritual well-being between psychological hardiness and mindfulness. When the research about spiritual well-being examined, it will be noticed that a wide variety of studies carried out and this issue is important for the society. There is limited number of studies that deal with the levels of spiritual well-being and psychological hardiness. This study is going to fill the gap in the literature because it gives clues about spiritual well-being between psychological hardiness and mindfulness.

## Method

### Research Model

The present research, which has a quantitative research paradigm, aims to investigate the relationships between psychological hardiness, mindfulness and spiritual well-being in university students testing the relationships between these variables. A relational survey model has been used in the research. A relational survey is a research model conducted in order to define the relationships among two or more variables and in order to obtain clues concerning cause-and-effect relationships (Büyüköztürk, Kılıç-Çakmak, Akgün, Karadeniz, & Demirel, 2008).

### Sample

The sample of the study was selected by using convenience sampling strategy. Participants of the present research consists of 561 university students, who studied at the department of Educational Sciences in the fall semester of 2017-2018 academic year. 434 were females (77,4%) and 127 were males (22.6 %) and in total 561 students who voluntarily responded to the scale item in this study. 361 students (64%) aged between 17 and 21, 155 students (28%) aged between 22 and 26, 23 students (4%) aged between 27 and 31, 22 students (4%) aged between 32 and over.

### Data Collection Tools

**Demographic Information Form.** This was designed by the researcher to determine participants ages, gender, education level.

**The Psychological Hardiness Scale.** The Psychological Hardiness Scale was developed by Işık (2016). A systematic approach was followed for developing the scale. Total of 407 adults participated in the study (285 female, 122 male). Exploratory and confirmatory factor analyses are applied in order to determine the construct validity of the scale. After the exploratory factor analysis, the scale included 21 items and three factors. These factors were labeled as commitment, control and challenge in light of the relevant literature. Also the three factors construct of the

scale is confirmed by confirmatory factor analysis. Besides according to t-test results differences between each item's means of upper 27% and lower 27% points were significant. The Cronbach alpha coefficient for the whole scale was found to be .76, whereas the values of Cronbach alpha coefficient for dimension factors of the scale ranged between .62 and .74. The findings of the study revealed that the scale was a valid and reliable instrument for measuring psychological hardiness personality trait.

**Five Facets Mindfulness Questionnaire.** Five Facets Mindfulness Questionnaire adapted to Turkish by Kınay (2013). The aim of the present study was to adaptate in Turkish and determine the reliability and validity of the Five Facets Mindfulness Questionnaire. Because mindfulness is not a well-known concept and research area in Turkey, with the aim of increasing researches on it, the adaptation of Five Facets Mindfulness Questionnaire (FFMQ) into Turkish, validity and reliability studies of the scale were done on a group of university students in this study. The original and two weeks later Turkish versions of the scale were administered to translation and interpreting studies and English language and literature 4th year undergraduate students and significant positive correlations between Turkish and English version scores were found. The Cronbach's Alpha internal consistencies of the scale were between .67 and .85. To determine the construct validity of FFMQ, factor analyses were done and it is found that the scale has five factors. The communalities for all items were between .38 and .79. Factor analyses showed that 4th item of the scale belongs to different factor than the original one's. The test- retest correlations of the scale were between .23 and .71. There were also significant positive relationships with respect to the correlation analysis employed for the convergent and discriminant validity of FFMQ.

**Three-factor Spiritual Well-being Scale.** Three-Factor spiritual well-being scale was developed by Ekşi ve Kardaş (2017), as a way of assessing how well adults' lives align with their values and their understanding of ultimate meaning in personal, social, environmental, and transcendental terms. The items on the scale were selected based on existing literature and essays addressing spirituality. The scale was then shown to 17 specialists in spirituality and edited in response to their comments to produce the last version of each item. The scale, composed of 49 items, was then administered to 865 adults (498 women, 57.6%; 367 men, 42.4%). Based on the results, the item set was then resolved to a 29-item scale, and Exploratory Factor Analysis revealed three significant dimensions of spirituality, which are transcendence, harmony with nature, and anomie. Construct validity and reliability were empirically ascertained and the goodness of fit was determined for the proposed model of spiritual well-being. (KMO: .951, when eigenvalue is 2; total item explanation variance: 58.337 %). The ensemble of the model's coefficients are  $\chi^2/df = 4.11$ , RMSEA = .06, SRMR = .50, NFI = .90, CFI = .92. The results show that the Spiritual Well-Being Scale has the ability to measure adults' spiritual well-being in a valid and reliable manner.

## Data Analysis

Structural equation modelling analysis was conducted in order to define the role of spiritual well-being in relationship between psychological hardiness and mindfulness in university students. Structural equation modelling is a statistical approach that reveals the causal and reciprocal relationships between observed and latent variables in order to test a theoretical model (Schumacker & Lomax, 2004). Structural equation modelling analysis was conducted on AMOS 19.0 Program for the present research. The model proposed in this study relating to the relationships among psychological hardiness, mindfulness and spiritual well-being is presented in Figure 1.

## Findings

The obtained model ( $X^2 = 189.078$ ,  $df = 42$ ,  $p < .001$ ) includes three exogenous (transcendence, harmony with nature and anomi) and two endogenous (mindfulness and psychological hardiness) data. Every path presented in the model was found statistically significant. The Bentler-Bonett normed fit index (NFI), The Tucker-Lewis coefficient fit index (TLI) and other fit indices showed that the model presents a good fit (Table 1). Every two-way correlation between endogenous data in the model is high and statistically significant. These values are also affected from the correlation values of the sub-dimensions of the scales used in the research.

Table 1  
*Statistical values related to the fitting of structural equation model*

Measure	Good fit	Acceptable fit	Fit Index Values of the Model
( $X^2/sd$ )	$\leq 3$	$\leq 4-5$	4.50
RMSEA	$\leq 0.05$	0.06-0.08	0.06
SRMR	$\leq 0.05$	0.06-0.08	0.06
NFI	$\geq 0.95$	0.94-0.90	0.92
CFI	$\geq 0.97$	$\geq 0.95$	0.95
GFI	$\geq 0.90$	0.89-0.85	0.95
AGFI	$\geq 0.90$	0.89-0.85	0.91
TLI	$\geq 0.95$	0.94-0.90	0.91

According to the fit values presented in Table 1, ,  $X^2/sd = 4.50$ ,  $RMSEA = 0.06$ ,  $SRMR = 0.060$ ,  $NFI = 0.92$ ,  $CFI = 0.95$ ,  $GFI = 0.95$ ,  $AGFI = 0.91$  ve  $TLI = 0.91$  olduğu bulunmuştur. Generally, the model has desired fit values (Bollen, 1989; Browne & Cudeck, 1993; Byrne, 2010; Hu & Bentler, 1999; Kline, 2011; Tanaka & Huba, 1985). Single factor model that was tested is presented in Figure 1. All the paths shown in the model are meaningful at 0.001 level.

Figure 1  
The path analysis for the model

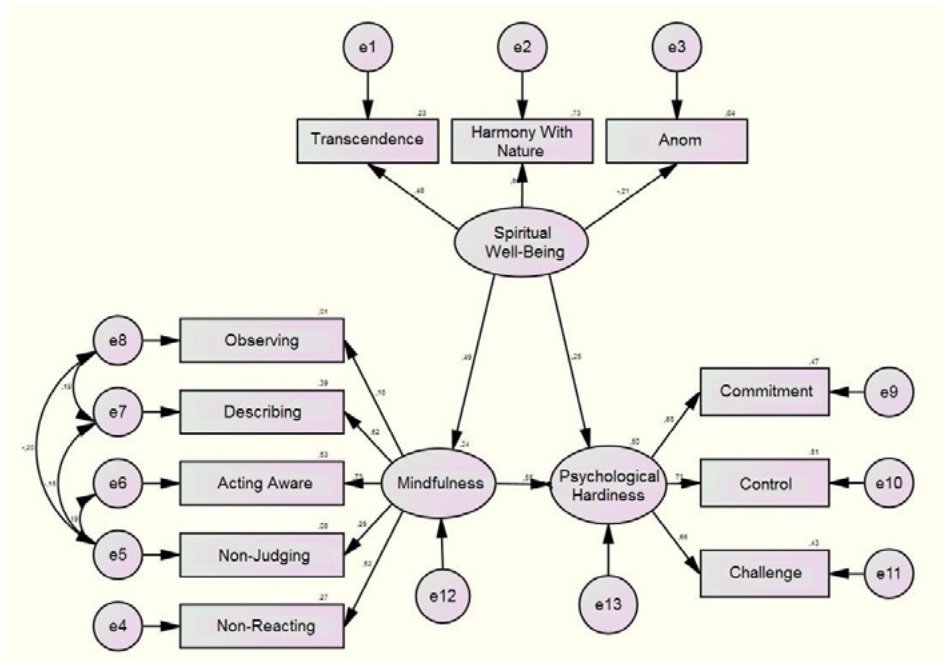


Table 2  
Model for the relationships between spiritual well-being, mindfulness and psychological hardiness and in the university students.

Predictor Variable	Dependent Variable	Total Effect	Direct Effect	Indirect Effect	Standard Error	Critical Value
Spiritual well-being	Mindfulness	0.49	0.49	0	0.57	6.20*
Spiritual well-being	Psychological hardiness	0.25	0.25	0	0.41	3.57*
Mindfulness	Psychological hardiness	0.55	0.55	0	0.10	6.70*

Total effect = Direct effect + Indirect effect, \* $p < 0.01$ , \*\* $p < 0.05$ .

Examination of the model in Figure 1 and the data in Table 2 shows that the most important independent variable affecting psychological hardiness is mindfulness ( $t=6.70, p<0.01$ ). Correlation coefficient of this factor was found as  $\beta=0.55$ . Predicting university students relationships between mindfulness levels and psychological hardiness levels show that there is a positive linear correlation between these two variables. Namely, the university students mindfulness levels increase as their psychological hardiness levels increase according to the research findings.

In addition, the second most important variable affecting psychological hardiness in the tested model is spiritual well-being ( $t= 3.57, p<0.01$ ). Correlation coefficient value of this factor was found as  $\beta= 0.25$ . The predictor relationship between university students spiritual well-being and their psychological hardiness levels is a positive linear relationship. In other words, findings revealed that as the university students spiritual well-being levels increased, their psychological hardiness levels increased as well.

Finally, according to the tested model, the most important independent variable affecting mindfulness is spiritual well-being ( $t=6.20, p<0.01$ ). Correlation coefficient value of this factor was found as  $\beta = 0.49$ . The predictor relationship between university students mindfulness and their spiritual well-being levels is a positive linear relationship. In other words, findings indicated that as the university students mindfulness levels increased, their spiritual well-being levels increased.

### Discussion

According to the results of this study, mindfulness was found to have the most significant effect on psychological hardiness. It was observed that there was a positive linear relationship between mindfulness levels and psychological hardiness levels of university students. There are studies in literature similar to the results of this research. Vinothkumar, Vinu & Anshiya (2013) found that mindfulness has a positive correlation with commitment and control, that are two of the sub-dimensions of hardiness. Pāvulēns & Vecgrāve (2013) also found that mindfulness was found to be significantly related to commitment, a sub-dimension of psychological hardiness, in the positive direction. Another research that indirectly supports the results of this study was conducted by Balcı (2018) to reveal that the participants had positive changes in resilience and emotional intelligence scores after the mindfulness program. Deniz, Erus & Büyükcebeci (2017) found that the increase of mindfulness level increases emotional intelligence level. There are studies showing that mindfulness is positively significant in predicting psychological resilience (Keye & Pidgeon, 2013; Taşdemir, 2018). Kemper and Khirallah (2015) found that as a result of mind-body skills training in health professionals is associated with in mindfulness and resilience.

According to another finding of the study, the second important variable that affects psychological hardiness is the spiritual well-being variable. There are some studies that are parallel to the results of this research. Kanya (2000) conducted a study of university students, revealing that spiritual well-being and psychological hardiness are powerful predictors of self-esteem. Sedighehi, Bita & Mahdi (2017) found that hope levels were higher in patients with higher commitment levels than the sub-dimensions of spiritual well-being and psychological hardiness. In a study

conducted by Carson and Green (1992) on 100 participants with (HIV+) virus, there was a significant relationship between existential well-being and psychological hardiness, which is the sub-dimension of spiritual well-being; people who can find meaning and purpose in their lives and who have high spiritual well-being are more hardy. Marsh, et al. (1999) found that spiritual well-being has a direct mediator effect on psychological hardiness and burnout. In addition, spiritual well-being should be considered as a factor in reducing burnout and work stress. A similar study by Sims (2000) shows that psychological hardiness and spiritual well-being are negatively related to burnout; existential well-being, which is sub-dimension of spiritual well-being, and psychological hardiness are positively related.

Finally it was found that the important independent variable that affects mindfulness was spiritual well being. It was concluded that there is a positive linear relationship between the spiritual well-being and mindfulness of university students. A literature review presents similar research conducted on this topic. Mathad, Rajesh & Pradhan (2019) found that satisfaction, mindfulness and self-compassion play an important role in the personal, social, environmental and transcendental areas of spiritual well-being. Research findings in a study conducted by Dami, Tameron & Alexander (2018) show that mindfulness significantly affects spiritual well-being. Silva, et al. (2016) studied the effect of mindfulness, self compassion and spiritual well being in chronic depression. According to the findings, it was determined that there was a negative correlation between depression and the mindfulness dimensions of non-reactivity and non-judging, and the spiritual well-being dimension of personal well-being. Colle, et al. (2010) concluded that there was a significant improvement in spiritual well-being after the MBSR (Mindfulness Based Stress Reduction) Program. Various studies examining the relationship between spirituality and mindfulness (Greeson, et al., 2011; Falb and Pargament, 2012). Even not directly related with this research, Carmody, et al., (2008) revealed that the increase in the level of mindfulness and spirituality was associated with decreased psychological distress and reported medical symptoms. Also the relationship between mindfulness and well-being has been examined in many studies. There are some researches showing that there is a significant relationship between mindfulness and well being (Carmody & Baer, 2008; Howell et al., 2008), psychological well being (Brown & Ryan, 2003; Çelikler, 2017), subjective well being (Brown & Kasser, 2005). Similarly, Jafari, et al. (2010), found a significant relationship between spiritual well-being and mental health; religious and existential well-being significantly predicted mental health.

According to the results obtained and the studies supporting these results directly and indirectly, spiritual well-being was found to be related to mindfulness and psychological hardiness levels of university students. The present research has certain limitations. The research has been limited by the university students. Therefore, the



obtained findings cannot be generalized to other age groups. Repeating the study with different socio-demographics, other age groups and professions can contribute to generalizing the limitations of this study's findings. There may be different variables mediate spiritual well-being. It is *useful to consider* different variables that may relate to spiritual well-being in future studies. Mindfulness has become increasingly researched. Also, mindfulness training program can be included in high school curriculum as in many schools worldwide. It is believed that conducting guidance studies in schools and different institutions related to spiritual well-being and psychological hardiness will be beneficial for public health.

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Research Article


# Assessing the Predictor Roles of Mindfulness and Spiritual Intelligence for Depressive and Anxiety Symptoms

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## Abstract

The goal of this study was to examine the effects of mindfulness (MF) and spiritual intelligence (SI) as predictors of depression and anxiety, the most frequent manifestations of mental disorders – among 184 Turkish participants of diverse ages, predominantly students, living in Istanbul and Sarajevo. Four instruments were administered either directly or via web-based services: Scale for Spiritual Intelligence (SSI), Hospital anxiety and depression scale (HADS), Five Facet Mindfulness Questionnaire - Short Form (FFMQ-S) and Sociodemographic Information Form. Through the use of linear regression analysis, Actaware ( $b = -.19, p \leq .001$ ), Nonjudge ( $b = -.22, p \leq .001$ ), Nonreact ( $b = -.19, p \leq .001$ ) subscales of FFMQ-S were found to be negative predictors for depression and anxiety, whereas, Self-understanding subscale of SSI was not significant. Although our findings suggest that spiritual intelligence is not significant in prediction of depression and anxiety, our research provides empirical evidence for the link between MF, SI, depression and anxiety, as well as revealing MF as predictor for anxiety and depression which may be useful for further improvements in the scope of current interventions.

## Keywords:

Mindfulness • Anxiety • Depression • Spiritual Intelligence • Mental health

## Bilinçli Farkındalık ve Manevi Zekanın Depresyon ve Anksiyete Belirtileri Üzerindeki Rolünün Değerlendirilmesi

### Öz

Bu çalışmada Bilinçli Farkındalık ve Manevi Zekanın, en yaygın psikolojik durumlar olarak bilinen depresyon ve anksiyete üzerindeki etkisinin toplam 184 katılımcı – çeşitli yaşlardan olmakla beraber yoğunlukla öğrencilerden oluşan, İstanbul ve Saraybosna’da yaşayan, arasında incelenmesi amaçlanmıştır. Dört ölçek doğrudan veya web formları aracılığıyla uygulanmıştır: Manevi Zekâ Ölçeği, Hastane Anksiyete ve Depresyon (HAD) Ölçeği, Beş Faktörlü Bilgece Farkındalık Ölçeği-Kısa Formu (BFBFÖ-K) ve Sosyodemografik Bilgi Formu. Bilinçli Farkındalık Ölçeğinin Dikkati Düzenleyebilme ( $b = -.19, p \leq .001$ ), Yargılamadan Gözleme ve İzleme ( $b = -.22, p \leq .001$ ), Etkilenmeden Gözleme ve İzleme ( $b = -.19, p \leq .001$ ) alt boyutlarının depresyon ve anksiyete belirtilerini negatif yönde anlamlı olarak yordadığı bulunurken, Manevi Zeka ölçeğinin kendini anlama alt boyutu bu ilişki analizinde anlamsız bulunmuştur. Elde edilenlere göre, bu çalışma Bilinçli Farkındalık, depresyon ve kaygı arasındaki anlamlı ilişkinin ve bu ilişkide Manevi Zekanın rolünün anlaşılması için gelecek çalışmalara ışık tutmaktadır.

### Anahtar Kelimeler:

Bilinçli Farkındalık • Anksiyete • Depresyon • Manevi Zeka • Ruh Sağlığı

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In recent years, there has been an increasing interest in mindfulness (MF), suggesting alternative techniques and conceptualization of it as an integrated part of psychotherapy strategies. (Academic Mindfulness Interest Group, 2006). While a variety of definitions of mindfulness have been suggested, we find it useful to consider the operational definition suggested by (Bishop et al., 2004) who defined it through two main components involving ‘present’ participation, (i) *self-regulation of attention* enabling enhanced identification of present mental process, (ii) *orientation to experience* particular commitment to one’s own experiences toward current events, classified by curiosity, openness and acceptance. Several other definitions suggested as ability to direct attention or shift focus in particular (i) with an aim, (ii) at a given moment, (iii) with nonjudgmental acceptance of self-experience. In contemporary psychology, it is based on the framework of *mental training* which aims to equip individuals with certain skills and present moment awareness to reduce vulnerability to psychopathology — by lowering the effects of psychological distress and abnormal behavior. However, several studies suggest different effects for MF among nonmeditators with no prior meditation experience and/or knowledge in comparison to those meditators with past meditation experience, as well as potentially differing among meditators following different styles in their practice (Cardaciotto et al., 2008). Besides, it is worthwhile to consider several studies in this context, for instance, a recent longitudinal study based on students’ academic stress and symptoms of depression shows that there is a negative correlation between depression and mindfulness, which may be counteractively functional against rumination (Barnes & Lynn, 2010). On top of that, a study has confirmed that regular participation in mindfulness activities have shown to be negatively correlated with the difficulty ignoring the frequency and perception of negative automatic thoughts (Frewen et al., 2008) de-centered, and non-attached ways. However, empirical research has not examined associations between mindfulness and responses to negative automatic thoughts, such as the ability to let go of negative cognition. In the first study reported in this article, measures of dispositional mindfulness were negatively correlated with negative thought frequency and perceptions of the ability to let go of negative thoughts in an unselected student sample. In the second study reported, these associations were replicated in a treatment-seeking student sample, where participation in a mindfulness meditation-based clinical intervention was shown to be associated with decreases in both frequency and perceptions of difficulty in letting-go of negative automatic thoughts (Frewen et al., 2008).

Since 90% of people in the world practices some sort of spiritual activities, Spiritual Intelligence (SI) is another concept — defined as conscious awareness that manifests one’s potential of vision, purpose and value, recently striking considerable attention from scientific community (Koenig, 2009). On top of that, some other preliminary works have primarily focused on developing the definition, for instance, 5 main



subdimensions as consciousness, transcendence, grace, meaning and truth (Amram & Dryer, 2008). An increase in SI was later noted among mental health researchers due to its association with coping mechanisms and even certain psychopathological conditions (e.g., depression) (Ebrahimi et al., 2012). Yet only a few researchers addressed the question of SI in the context of mental health despite the evident benefit of spiritual practices for anxiety (Hofmann et al., 2016), regulating mood via increased GABA levels (Streeter et al., 2010), enhancing cognitive skills (e.g., executive functions) (Gothe, N., Pontifex, M. B., Hillman, C., & McAuley, 2013).

Anxiety can be defined as the anticipation of physiological and psychological course ahead of a potential threat (American Psychiatric Association, 2013), a very common mental health issue across the globe, for instance; the prevalence of anxiety disorders are the highest in the U.S., affecting 18.1% of the population (Bandelow & Michaelis, 2015). Another common condition is depression — a representation of various symptoms including sadness, irritability emptiness in addition to certain cognitive and somatic signs that impact one's capacity to function (American Psychiatric Association, 2013), revealed to be one of the most common mental health problems in global population (Vos et al., 2015). With these in mind, researches with various populations have shown that 70% of individuals with depressive signs also display anxiety symptoms, indicating high comorbidity in between (Wu & Fang, 2014) — often derived from similar dysfunctional patterns in cognition (e.g., executive function) (Castaneda et al., 2008). Although there are number of researches examining the effects of spiritual practices on anxiety and depression separately, a clear understanding on the association of SI and MF with anxiety and depressive symptoms is lacking. A study has found that depression and anxiety are strongly linked with greater cognitive dysfunctional patterns (Airaksinen et al., 2004). Interventions based on MF — involving with spiritual practices, display promising results in improving neurobiological mechanisms of cognitive capacity (e.g., executive function) (Tang et al., 2012). In addition, numerous studies support MF as improving overall cognitive functioning; memory (Jha et al., 2007), sustained attention (Chambers et al., 2008), visual coding and verbal fluency (Zeidan et al., 2010), therefore understanding the aspects of MF and SI might be helpful to offer strategies for prevention of depression and anxiety.

Our hypotheses were (i) those with higher MF have lower symptoms of depression and anxiety, (ii) those with higher SI have lower symptoms of depression and anxiety, (iii) and higher SI is associated with higher mindfulness activity.

## Materials and Methods

### Participants

One hundred and ninety individuals were recruited for the study with a convenience sampling method. To recruit participants, we posted an advertisement on the internet and published an announcement on social media platforms. The inclusion of participants was based on 3 characteristics; those (i) between 18-65 years of age, (ii) with no cognitive deficits that may prevent from filling up presented instruments, (iii) with no record of psychiatric disorders. Individuals with any kind of psychiatric disorder were excluded based on the self-report information and medical registries provided by participants. Six participants were dropped due to the presence of mental disorder. Ultimately, statistical analyses were performed with 184 participants. The participants were asked to participate in the research willingly which may last for 15 minutes approximately, those who accepted were either be introduced to hardcopy of scales, or, had access to our research scales on web-based questionnaires, which was distributed via links over social platforms. All the participants were informed about their right to withdraw their participation at any time without the risk of penalty and they provided written informed consent.

### Instruments

***Sociodemographic information Form.*** This instrument is designed to collect data about participant information with regards to the variables that we included in our study. It is composed of 9 items, each valued in basic numbers. These 9 items involve questions about age, gender, residence, employment status, education level, psychiatric diagnosis, frequency of meditative habits, and frequency of physical exercise on weekly basis. It collects overall demographic information of participants in addition to particular questions related to mindful activities, hobbies and how frequently these actions are employed on regular basis.

***Five Facet Mindfulness Questionnaire - Short Form (FFMQ-S).*** FFMQ-S is the shortened version of Five Facet Mindfulness Questionnaire which was first developed by Baer et al., in 2006. The number of items is reduced from 39 to 20 in FFMQ-S, scored from 1 (*strongly disagree*) to 5 (*strongly agree*). Five factors are described as (1) *Observe (OB)*, (2) *Describe (DS)*, (3) *Nonjudging of inner experience (Nonjudge)/(NJ)*, (4) *Acting with awareness (Actaware)/(AA)* and (5) *Nonreactivity to Inner Experience (Nonreact)/(NR)* (Tran et al., 2013) item fitting, mindfulness in the general population, and on the higher order structure of mindfulness. We derived an alternative two-factor higher order structure for the FFMQ, delineating the attentional and experiential aspects of mindfulness. Method: Data of 640 persons from the Austrian community were used for primary analyses, and data of 333 Austrian students were used for cross-validation. Confirmatory

analyses and exploratory structural equation modeling (ESEM). Higher scores in each subtest indicate better mindfulness in relevant aspect. Validity and reliability study of Turkish version showed that it is available for use in mindfulness-related researches among Turkish sample (Cronbach's  $\alpha = .71$ ) (Ayalp & Hisli Şahin, 2018).

**Scale for Spiritual Intelligence (SSI).** SSI was developed by Kumar & Mehta in 2013, inspired from a collectivist philosophy based on 5 factors composed of Purpose in life, Human values, Compassion, Commitment towards Humanity, Understanding Self, and Conscience. It is scored on 5-point Likert scale, including 20 items. It was adapted to Turkish by Erduran-Tekin & Ekşi, 2019098 high school students (440 females and 658 males, with the items reduced to 19 and factors reduced into 4 including understanding self (SU), human values (HV), compassion (CP) and conscience (CS). The total score is obtained by adding the scores from the sub-dimensions. High scores indicate high spiritual intelligence. The reliability and validity findings of adapted scale to Turkish have confirmed the use in scientific studies in Turkish population (Cronbach's  $\alpha = .85$ ) (Erduran-Tekin & Ekşi, 2019)098 high school students (440 females and 658 males).

**Hospital anxiety and depression scale (HADS).** HADS was first developed by Zigmond & Snaith in 1983 to measure potential risk of depression and anxiety, based on a self-report of 14 items, 7 items for both subdimensions scored with 4 point Likert scale. This scale is suitable for our research as it measures anxiety and depression risk together through 7 questions for each. It was adapted to Turkish by Aydemir, Güvenir, Küey, & Kültür in 1997 who suggested the cut-off points for Turkish scale as 10 for anxiety and 7 for depression. It was suggested that it is available for use in mental health research despite its name implying a scale only for hospital. Higher scores of the subscales indicate higher levels of depression and anxiety symptoms. The Turkish adaptation of HADS was found to be valid and reliable in Turkish population (Cronbach's  $\alpha = .85$  for depression subscale, .77 for anxiety subscale) (Aydemir Ö, Güvenir T, Küey L, 1997).

### Statistical Analysis

Online and hardcopy data were both entered to the computer software. Scores were carefully installed and scores in reverse items were separately calculated. Descriptive statistics was utilized to reveal the details of sociodemographic profiles. Pearson's correlation analysis was used to discover the relationship between SI & MF individually, if any exists; and whether these two variables associated with depression and anxiety risk. Lastly, linear regression analysis was applied to significantly correlated subscales to see whether one predicts another. The statistical significance (p) value was set as 0.05 and the statistical equations were conducted with IBM's Statistical Package for the Social Sciences (SPSS). The study was approved by Institutional Review Board of International University of Sarajevo, IUS-REC-01-2995/2019.

## Results

The total number of participants were 184, composed of 83 males (45.1%) and 101 females (54.9%). 46 of all participants were found to be both depressed and anxious when sorted according to cut-off scores of HADS. The participants scored higher than cut-off in only anxiety category were 63, and 89 participants scored above depression cut-off score, solely. On the other hand, 78 participants were found to be both non-anxious and non-depressed. The frequencies and descriptive statistics were presented in Table 1.

Pearson's correlations were utilized to investigate the presumed association among the scores of 3 scales and coefficients were presented in Table 3. Results indicated that depression and anxiety were positively correlated. In addition, depression scores obtained from HADS are strongly linked with FFMQ-S across all factors in negative direction. Alternatively, when the relationship between anxiety and FFMQ-S was investigated, OB was left out due to insignificance, however, anxiety scores were negatively correlated with the other four factors of FFMQ-S; DS, AA, NJ and NR. Among subscales of SSI, only SU was significantly correlated with depression ( $r(182) = .27, p < .000$ ) and anxiety ( $r(182) = .23, p < .002$ ), though in a positive direction. Furthermore, negative correlations were found between SU and 3 factors of FFMQ-S; DS, AA and NJ.

Table 1

	N	%	M	SD
<i>Age</i>	184		23.2	4.66
<i>Gender</i>				
Male	83	45.1%		
Female	101	54.9%		
<i>Residency</i>				
City Center	70	38%		
Not city center	114	62%		
<i>Employment</i>				
Full-time	17	9.2%		
Part-time	16	8.7%		
Unemployed/ Student	151	82.1%		
<i>Highest Academic Qualification</i>				
Primary School	3	1.6%		
Middle School	1	5%		
Secondary School	24	13%		
Bachelor	141	76.6%		

Table 1

	N	%	M	SD
Master	15	8.2%		
<i>Relaxation</i>				
Yes	105	57.1%		
No	79	42.9%		
<i>Frequency of Physical Activity</i>				
Never	38	20.7%		
1 – 2	78	42.4%		
2 – 3	31	16.8%		
3 – 4	13	7.1%		
4 – above	24	13%		
<i>Frequency of Spare-time activity</i>				
Never	5	6%		
1 – 2	15	17%		
2 – 3	13	21%		
3 – 4	8	25%		
4 and above	22	52%		
<i>Psychiatric Diagnosis</i>				
Yes	15	8.2%		
No	169	91.8%		

*Descriptive statistics and frequencies for sociodemographic variables*

Table 2

*Correlations among HADS, SSI and FFMQ-S*

Subscales	1	2	3	4	5	6	7	8	9	10	11
1. Anxiety	-										
2. Depression	.62**	-									
3. Observe (OB)	-.13	-.23**	-								
4. Describe (DS)	-.26**	-.31**	.09	-							
5. Act aware (AA)	-.41**	-.36**	.07	.31**	-						
6. Nonjudge (NJ)	-.42**	-.33**	.03	.22**	.28**	-					
7. Non-react (NR)	-.35**	-.31**	.25**	.15*	.20**	.02	-				
8. Self-Understanding (SU)	.27**	.23**	-.09	-.21**	-.22**	-.22**	-.20**	-			
9. Human Values (HV)	-.06	-.05	-.08	-.02	.03	.05	.13	.15*	-		
10. Compassion (CP)	.07	.01	.06	-.17*	-.12	-.07	-.02	.61**	.19**	-	
11. Conscience (CS)	.11	.07	-.12	-.10	-.03	-.15*	-.09	.44**	.41**	.38**	-

Note.  $N = 184$ . \* $p < .05$  \*\* $p < .01$

Linear regression analysis was used with those revealed as statistically significant factors in Pearson's correlation analyses. FFMQ-S's subdimensions and SSI subdimension were entered as predictors (independent variables) to explain the degree and impact on depression and anxiety (dependent variables). For depression, the results have shown that AA (negative), NJ (negative) and NR (negative) were found as predictors (see Table 3), however, OB and DS were not significant. For

anxiety, DS, AA, NJ and NR were included as potential predictors in linear regression. Similar to the depression results, we have found that AA (negative), NJ (negative) and NR (negative) were strong predictors for anxiety, however, DS was not a significant predictor (see Table 3). SU, subscale of SSI which was found to be positively correlated, was tested for each and it is not a significant predictor for neither depression nor anxiety. When calculated, the regression have displayed a large effect size ( $f^2 \geq 0.35$ ), accounting for 29% of the variation in FFMQ-S predictors with adjusted  $R^2 = 34.8\%$  (Minton & Cohen, 1971).

Table 3

*Multiple linear regression analysis for HADS and FFMQ-SF subscales*

Dependent variable	Predictors	B	SE	Beta ( <i>b</i> )	t	<i>p</i>	$R^2$
HADS-Depression	Actaware	-0.19	0.06	-0.19	-2.78	0.006	0.29***
	Nonjudge	-0.24	0.07	-0.22	-3.30	0.001	0.29***
	Nonreact	-0.23	0.08	-0.19	-2.84	0.005	0.29***
HADS-Anxiety	Actaware	-0.21	0.06	-0.23	-3.49	0.001	0.36***
	Nonjudge	-0.32	0.06	-0.31	-4.98	0.000	0.36***
	Nonreact	-0.31	0.07	-0.27	-4.33	0.000	0.36***

Notes for Table 3: HADS: Hospital Anxiety and Depression Scale, FFMQ-SF: Five Facet Mindfulness Questionnaire Short Form

\* $p < 0.05$ , \*\*  $p = 0.01$ , \*\*\*  $p < 0.01$

## Discussion

The initial objective of the study was to identify whether there is a direct relationship between MF, SI, depression and anxiety since several studies have previously suggested high level of associations between these variables among different populations (Agarwal & Mishra, 2016; Bayrami et al., 2014; Ebrahimi et al., 2012; Hazlett-Stevens, 2012). Four facets of mindfulness seem to appear strongly correlated despite OB remaining as a weak indicator of anxiety similar to those reported by previous studies (Curtiss & Klemanski, 2014). This may be related to the necessity of cognitive control that is not required during OB activity (Tran et al., 2013) item fitting, mindfulness in the general population, and on the higher order structure of mindfulness. We derived an alternative two-factor higher order structure for the FFMQ, delineating the attentional and experiential aspects of mindfulness. Method: Data of 640 persons from the Austrian community were used for primary analyses, and data of 333 Austrian students were used for cross-validation. Confirmatory analyses and exploratory structural equation modeling (ESEM. As previously mentioned, the effects of MF vary depending on prior experience of MF or meditation suggested by Baer et al. (2008), among nonmeditators OB may even serve as rumination — focusing and/or rethinking pattern towards one's own distress (Susan Nolen-Hoeksema et al., 1997). Besides, DS and AA are likely to be complementary as conducting the describing process requires internal or external awareness, which may supply the tools to keep self-judgement objectively intact. Therefore, negative correlation of both with anxiety and depression is easily understandable. Moreover, NJ and NR

referring nonreactive and nonjudgmental stance towards inner sensations seem to be associated with higher risk of depression and anxiety, potentially due to lack of coping mechanisms with ruminating thoughts. These results also corroborate the previous findings toward NJ and NR (Bohlmeijer et al., 2011).

Furthermore, considering SI finding and lack of evidence for hypothesis; a possible explanation for having only one-dimensional support towards previous literature might be the use of different scales which vary in nature and structure. In addition, the mean values of SI subscales in this study also differed from previous studies, for instance; mean values of subscales in Erduran-Tekin & Ekşi (2019) 098 high school students (440 females and 658 males) were much higher in comparison to ours, this data suggests that our participants were generally lower in SI which might be the reason due to which the association between SI and MF failed to be significant. On top of that, our participants were predominantly students and SI is inherently related to growth, therefore adolescents are likely to score less (Kumar & Mehta, 2011) which may explain our findings that SI with no association. It is interesting that we found a negative correlation between SU subscale, depression, and anxiety. SU items are based on one's understanding of self, very much similar to the term of rumination. Both appears to involve with certain degree of investigation towards oneself and the evidence presented thus far supports the idea that rumination predicts anxiety and depression symptoms (S. Nolen-Hoeksema, 2000; Vanderhasselt et al., 2016).

The generalizability of these findings is subject to certain limitations. First, the scope of this study was limited due to the cross-sectional design which disables conclusions on causality. Another source of weakness in this study which could have affected the measurements of variables was the use of self-report questionnaires which poses validity concerns for our findings. Additionally, it is unfortunate that the study did not include participants with diverse ages. The small sample size and the limited age range distribution did not allow broader ground of accuracy; therefore, the current results are mainly generalizable to student population in bachelor years. Including more adults in the study may have created larger representable results in terms of the correlation particularly with SI.

In conclusion, our findings provide empirical support for previously suggested associations between MF and depression & anxiety (Hofmann et al., 2010; Marchand, 2012; Song & Lindquist, 2015; Soysa, C.K., Wilcomb, 2013). In addition, there are several studies investigating the effectiveness of MF-integrated therapy approaches (Garland et al., 2018; Manicavasgar et al., 2011; Woolhouse et al., 2012) Therefore, our study may be useful for further strategies of MF integration in the scope of current interventions. Future studies with greater sample and age variety are needed to investigate SI and MF relationship in-depth.

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The study was approved by Institutional Review Board of International University of Sarajevo, with the official permission registered as IUS-REC-01-2995/2019. All procedures followed were in accordance with the ethical standards of the responsible committee on human experimentation (institutional and national) and with the Helsinki Declaration of 1975, as revised in 2000.

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# The Relationship between Spiritual Well-Being and Happiness: An Investigation on Teachers<sup>\*</sup>

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## Abstract

This study aims to examine the relationship between teachers' spiritual well-being and happiness levels. Being quantitative in nature, this study employs a relationship survey model. A total of 390 teachers employed in various grades of different types of schools (i.e., primary schools, middle schools, Imam-Khatib middle schools, Anatolian-science high schools, Imam-Khatib high schools, and vocational high schools) in Istanbul's Küçükçekmece district volunteered to participate in this study. The Personal Information Form, the Spiritual Well-Being Scale, and the Oxford Happiness Questionnaire were employed to collect data, which were then analyzed using Pearson's correlation coefficient and a regression analysis. The results of these analyses reveal that happiness is significantly and positively correlated with transcendence and harmony with nature whereas happiness is significantly and negatively correlated with anomie. While transcendence positively affects teachers' happiness, anomie negatively affects them. It has been found that this effect size is medium. Another important finding obtained in the study is that harmony with nature, one of the sub-dimensions of spiritual well-being, does not affect teachers' happiness.

## Keywords:

Well-being • Spiritual well-being • Happiness

## Spiritüel İyi Oluş ile Mutluluk Arasındaki İlişki: Öğretmenler Üzerine Bir İnceleme

### Öz

Araştırmanın amacı, öğretmenlerin spiritüel iyi oluşları ile mutluluk düzeyleri arasındaki ilişkiyi incelemektir. Çalışmada nicel araştırma yöntemlerinden ilişkisel tarama modeli kullanılmıştır. Araştırmaya İstanbul ili Küçükçekmece ilçesindeki ilkököl, ortaokul, imam hatip ortaokulu, anadolu-fen lisesi, imam hatip lisesi ve meslek lisesi okul türlerinde ve kademelerinde görev yapan 390 öğretmen gönüllü olarak katılmıştır. Veriler, "Kişisel Bilgi Formu" "Spiritüel İyi Oluş Ölçeği" ve "Oxford Mutluluk Ölçeği" kullanılarak toplanmıştır. Veriler, Pearson korelasyon analizi ve regresyon analizi ile çözümlenmiştir. Analiz sonucuna göre öğretmenlerin spiritüel iyi oluş aşkınlık ve doğayla uyum alt boyutları ile mutluluk arasında pozitif ve anlamlı ilişki bulunurken, spiritüel iyi oluş anomi alt boyutu ile mutluluk arasında negatif ve anlamlı ilişki bulunmaktadır. Aşkınlık, öğretmenlerin mutluluğunu olumlu etkilerken, anomi olumsuz etkilemektedir. Bu etki büyüklüğünün orta düzeyde olduğu tespit edilmiştir. Araştırmada elde edilen bir diğer önemli bulguda spiritüel iyi oluşun alt boyutlarından doğayla uyum öğretmenlerin mutluluklarını etkilememektedir.

### Anahtar Kelimeler:

İyi oluş • Spiritüel iyi oluş • Mutluluk

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Individuals may develop a sense of alienation and unhappiness in the face of constantly advancing technology, diverse means of communication, and ever-changing living conditions. Since time immemorial, man has used both faith and religious techniques to overcome whatever problems that have constituted hurdles to their attainment of happiness. Being a multi-faceted living creature endowed with diverse physical, social, emotional, and mental capacities, man also has a spiritual element. Just as each of these aspects are interconnected, each one has its own needs. When one's spiritual needs, like finding meaning to one's life, feeling secure, expressing affection, and being loved are not satiated, that person finds him/herself in a spiritual abyss (Çınar & Aslan, 2017).

Safeguarding one's spiritual framework is integral in securing that individual's happiness, as spiritual well-being (SWB) is just as important as physical health. Harmony between the body, brain, and soul is the criterion for judging a person to be completely healthy (Kavas & Kavas, 2014). Individuals who accord spiritual values a central place in their lives are able to overcome different situations more easily (Kardaş, 2017). Several studies have shown that spirituality reduces stress and has a positive impact on cardiac illnesses and high cholesterol (Daştan & Buzlu, 2010). When individuals become distanced from spiritual values and lose their purpose in life, they experience various psychological problems, which in turn may cause to physical discomforts (Mutluer, 2006). When faced with events that cause sadness like illness and death, people begin to question their existences and, through spirituality, are able to give new meaning to their lives (Hiçdurmaz & Öz, 2013). Those failing to discover or who are unable to live out their spirituality may feel loneliness and helpless while attempting to solve the problems they face. This feeling of helplessness pushes them to become distanced and alienated from society, which in turn causes divisions in the social fabric (Yılmaz, 2019).

SWB is to search for the meaning and purpose of life and to recognize that there is a power greater than oneself. A person who has attained spiritual wellness is highly satisfied with life and is a self-actualized individual (Korkut Owen & Owen, 2012). SWB is divided into two dimensions, the religious and the existential. A person's drawing closer to God or a higher power and the resulting spiritual fulfillment is religious wellness. A person's search for meaning and structuring his/her life accordingly is existential wellness. SWB shows that a person is fulfilled with the relationship s/he has with God, a higher power, him/herself, and his/her environment (Scott & Agretsti, 1998). In defining spirituality, one group of researchers used submission to God or a higher power whereas other researchers restricted it to the person's own inner world.

Holding that spirituality is a way of life that transcends all religions, Murray and Zentner (1989) assert that spirituality seeks to investigate the very meaning and

purpose of life itself while in a state of submission to God or a higher power (Cited in Baykal, 2018). As spirituality helps an individual attain meaning, knowledge, love, and hope, it interacts with the high level emotions causing happiness (Özen, 2010). Zinbauer et al. (1999) consider spirituality to be close to God and to build relationships with other living being. Chakraborty and Chakraborty (2004) define spirituality as orienting one's life toward a higher power as opposed to one's own ego (Cited in Örg ev & Gunalan, 2011). Schimdt-Wilk et al. (2000) describe spirituality as a person's internal awareness of him/herself (Cited in Örg ev & Gunalan, 2011). Spirituality is the state of submission to and trust in a higher power (e.g., God, an energy, nature...) than oneself in cases where s/he is powerless in the face of problems perceived to be otherwise insurmountable and by allowing the individual to find his/her purpose and path in life, enables him/her to recognize that s/he is a part of the greater universe by bringing him/her closer to nature. Because spirituality incorporates hope, the drive to find meaning, and submission to a higher power when one is overwhelmed, it leads individuals toward developing positive feelings.

The dominance of positivist and materialist philosophy in Western thought has led to psychologists' neglect of man's spiritual dimension. With the increase of problems faced by humans and modern psychologies inability to deal effectively with these problems, researchers in the field of psychology have begun to investigate spirituality (Ekşi & Kaya, 2016). Addressing all of man's diverse aspects, Maslow placed spiritual values on the highest rung of his hierarchy of needs. As material wealth has been found to be inadequate in solving the problems dominating modern life, in addition to the desire to live a peaceful and happy life, interest in spirituality has increased (Çınar & Aslan, 2017). From the lowest to the highest rung on his hierarchy of needs, Maslow indicates physiological needs, the need for safety, the need for love and belonging, the need for respect, and the need for self-actualization. It is this final need that is related to the need for meaning in and to give meaning to life (Kızıllırmak, 2015). Humans are the sole known living creature that seeks meaning and spirituality is the strongest point of reference in their efforts to give meaning to life. Those individuals unable to satisfy their need for meaning experience forlorn emotions like stress, anxiety, hopelessness (Kızıllırmak, 2015).

Happiness is defined as the feeling of pleasure, delight, contentment, prosperity, bliss, and good fortune experienced from the complete and continued fulfillment of one's ambitions (Turkish Language Institute [TDK], 2020). Happiness is related to individuals' contentment with life and those who consider themselves to have a high quality of live are defined as happy (Bülbül & Giray, 2011). Happiness has both a physiological and psychological aspect to it. In order for a person to be happy, the brain must produce serotonin, and in order for the psychological effects of serotonin to occur, one must feel safe and have satisfied all of the prerequisite conditions of happiness (Baysal & Aka, 2013).

Happiness emerges as a result of the interaction between positive emotions, negative emotions, and life satisfaction. Positive emotions include joy, trust, and excitement whereas negative emotions refer to sadness, hate, and anger, among others. Life satisfaction pertains to fulfillment in a variety of human spheres. The prevalence of positive emotions over negative ones in an individual's life and high level of contentment indicates happiness (Eryılmaz, 2011). According to Lyubomirski (2008), 50% of happiness depends on our genetic makeup, 40% on our behaviors, and 10% on our living conditions. Individuals may increase their level of happiness by having a positive attitude, learning how to deal with stress, prioritizing social relationships, practicing empathy, establishing a specific goal in life and striving to attain it, living out spirituality, and taking care of their physical health.

The concept of happiness entered into the field of psychology with the emergence of positive psychology and the subsequent studies conducted on it in this specific branch. The fact that positive psychology has shown psychology's focus on dealing with individuals' negative experiences to be inadequate and that it is necessary to examine, reveal, and strengthen individuals' positive and strong qualities has caused researchers to take an interest in and conduct research in this field. People's search for meaning in life following the destruction caused by the Second World War and Seligman's efforts to eliminate the shortcomings brought about by people's neglecting to realize their innate abilities influenced other specialists to begin working in this field, which would then give birth to positive psychology (Akçay, 2011). The concept of happiness in psychology is discussed following either a hedonic or eudaimonic approach (Koydemir & Mısır, 2015). Whereas the hedonic approach regards happiness as subjective well-being and is characterized by the prevalence of positive emotions over negative ones, the eudaimonic approach considers happiness to be psychological well-being and seeks to help individuals utilize their human potentials in the most effective way possible to attain self-actualization and meaning in life (Koydemir & Mısır, 2015).

Several studies on SWB and happiness appear in the Turkish literature. For example, there are studies examining the correlation between social gender perception and SWB (Keçeci, 2018); virtual identity and SWB, on the one hand, and narcissistic tendencies, on the other (Kardaş, 2017); alienation and death perception, on the one hand, and spiritual wellness, on the other (Erdoğan Kavalalı, 2019); spirituality and spiritual care perception, on the one hand, and professional satisfaction, on the other (Uygur, 2016); spiritual leadership and performance (Narcıkara, 2017); spiritual leadership and school culture (Özgenel & Ankaralıoğlu, 2020); and test anxiety and spirituality (Şeftalici, 2017). Likewise, there are studies examining the correlation between happiness, on the one hand, and types of attachment, life satisfaction, and depression, on the other (Demirel, 2018); happiness and willingness to seek



psychological help (Çolak, 2018); happiness and classroom management (Düzgün, 2016); happiness, on the one hand, and individuality and self-compassion, on the other (Duman, 2014); death anxiety, on the one hand, and social life and happiness, on the other (Akin, 2018); happiness and school climate (Özgenel & Çetiner, 2019); and religious orientation and happiness (Kurnaz, 2015). Although it is assumed that school administrators' leadership styles indirectly influence teachers' happiness levels (Işık, 2009), a review of the literature reveals that the number of studies examining teachers' SWB and happiness levels is certainly limited. Teachers have the most important role in shaping the future of the culture and whether they are happy or not impacts their ability to fulfill their teaching duties. Since ascertaining teachers' SWB and happiness levels is of vital importance by dint of their being an undeniable human need, answers to the following questions were sought:

- (i) Is there a meaningful correlation between teachers' SWB and happiness levels?
- (ii) Do teachers' SWB levels predict their happiness levels?

## Method

### Research Model

This study has employed a relational survey model in its aim to determine the relationship between teachers' SWB and happiness levels, as it allows researchers to examine the relationship between two or more variables (Büyüköztürk, Çakmak, Akgün, Karadeniz, & Demirel, 2017).

### Population and Sample

The research universe consisted of 390 teachers employed in different types of schools throughout Istanbul's Küçükçekmece district. Participants were selected through stratified sampling, which is a sampling method that identifies subpopulations within the universe and represents them in the resulting sample in a proportionate manner (Özen & Gül, 2007). School strata were divided into primary schools, middle schools, Imam-Khatib middle schools, Anatolian-science high schools, Imam-Khatib high schools, and vocational high schools. Using random sampling, three schools from each stratum were selected for inclusion and a total of 390 teachers employed in these schools volunteered to participate in the study. Of these 390 teachers, 279 (71.53%) were females and 111 (28.46%) were males, 109 (27.94%) were thirty and younger, 185 (47.53%) were between thirty-one and forty, 74 (18.97%) were between forty-one and fifty, and 22 (5.64%) were fifty or older. Whereas 318 (81.53%) of the teachers had earned a bachelor's degree, 72 (18.46%) had earned some sort of graduate degree. With regard to seniority, 11 (29.74%) were first to

fifth-year teachers, 96 (24.61%) were sixth to tenth-year teachers, 55 (14.10%) were eleventh to fifteenth-year teachers, 61 (15.64%) were sixteenth to twentieth-year teachers, and 62 (15.89%) were in their twenty-first year of teaching or higher. By school, 131 (35.58%) were primary school teachers, 64 (16.41%) were middle school teachers, 14 (3.58%) were Imam-Khatib middle school teachers, 72 (18.46%) were Anatolian-science high school teachers, 66 (16.92%) were vocational high schools, and 43 (11.02%) were Imam-Khatib high school teachers.

### **Data Collection Tools and Data Collection**

We employed the Personal Information Form, the Spiritual Well-Being Scale and the Oxford Happiness Questionnaire to collect data for his study.

**The Oxford Happiness Questionnaire (Short Form) [Turkish Version].** Developed by Hills and Argyle (2002), this questionnaire was adapted to Turkish by Doğan and Çötök (2011) with a study sample composed of 532 Turkish university students. The Turkish version of the questionnaire had a reliability coefficient (Cronbach's  $\alpha$ ) of 0.74 and a test-retest reliability coefficient of 0.85. Both an exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) were conducted to determine the questionnaire's validity. The EFA revealed that, like the original version, the Turkish version was composed of a single factor, a fact which was then confirmed through a CFA conducted with Turkish university students. Accordingly, the Turkish version of the questionnaire was found to be valid and reliable. The items in the questionnaire are rated on a 5-point Likert-type scale (i.e., 1 = I completely disagree, 2 = I disagree, 3 = I partially agree, 4 = I agree, 4 = I completely agree), with a high score indicating that the individual had high levels of happiness (Doğan & Çötök, 2011).

**Spiritual Well-Being Scale.** Developed by Ekşi and Kardaş (2017), this scale was developed after surveying the items of similar scales in the literature, compositions written to university students were read, and obtaining feedback from 17 field specialists. The scale's reliability and validity were verified with 865 adult individuals. Whereas the provisional scale contained 49 separate items, following an EFA and CFA, the final version of the scale was found to be composed of 29 items and three factors, namely, Transcendence, Harmony with Nature, and Anomie. Cronbach's  $\alpha$  was .953 for Transcendence, .864 for Harmony with Nature, .853 for Anomie, and .886 for the entire scale. The items are rated on a 5-point Likert-type scale (i.e., 1 = This does not apply to me at all, 2 = This does not apply to me, 3 = This applies to me a bit, 4 = This applies to me very much, 5 = This applies to me completely) and gauge adults' SWB. Items from the anomie subscale are reverse scored prior to calculating total scores (Ekşi & Kardaş, 2017).

*Acknowledgment:* In the study, permission was obtained from the researchers who developed data collection tools and adapted them to Turkish. In addition, necessary legal permissions were obtained from Istanbul National Education Directorate and Istanbul Governorship (Data: 19.04.2019, Number: 59090411-20-E.7973003).

## Data Analysis

We obtained the necessary permissions from the researchers who had developed the scales used, the Istanbul Directory of National Education, and Istanbul Governorate to collect data for this study. We collected data on-site and in accordance with research training standards after going to the schools and informing the teachers about the research we were to conduct. The data obtained were analyzed using SPSS; however, prior to performing any such analysis, their kurtosis, skewness, and reliability coefficients were calculated to ascertain whether they showed normal distribution. Table 1 depicts the values calculated for these coefficients.

Table 1  
*Descriptive Values for Spiritual Well-Being and Oxford Happiness Questionnaire*

	n	Mean	Sd	Kurtosis	Skewness	Cronbach Alpha $\alpha$
Spiritual Well-Being	390	4.195	.556	-.605	1.414	.812
Happiness	390	3.587	.708	-.416	.027	.763

Table 1 reveals that the kurtosis and skewness values are between  $\pm 1.5$  and show normal distribution. We used Pearson's correlation coefficient to ascertain as to whether there was any correlation between the independent (i.e., SWB) and the dependent (i.e., happiness) variables. We conducted a regression analysis and calculated the effect size to determine the predictive power of SWB. Whereas we conducted a correlation analysis to identify the relation between the variables, we performed a regression analysis to ascertain how much of a change occurred in the dependent variable (i.e., happiness) when the independent variable (i.e., SWB) experienced a single unit of change. The regression analysis found that both SWB and happiness were found to be continuous variables, that there was a linear correlation between them, that three values were not contained in the data set, that data showed normal distribution, that errors were random, and that there was a strong correlation between the independent variables.

## Findings

This section describes the analyses conducted during our research. Table 2 presents the results of the analysis conducted to determine the relationship between teachers' spiritual well-being and happiness levels.

Table 2  
*Relationship between Teachers' Spiritual Well-Being and Happiness Levels*

	Mean	Sd		1	2	3	4	5
			r	1				
1-Transcendence	4.20	.874	p					
			n	390				
			r	.154**	1			
2-Harmony with Nature	4.53	.657	p	.002				
			n	390	390			
			r	-.099	.211**	1		
3-Anomie	2.21	.757	p	.051	.000			
			n	390	390	390		
			r	.894**	.473**	-.436	1	
4-Spiritual Well-Being (Total)	4.19	.556	p	.000	.000	.000		
			n	390	390	390	390	
			r	.349**	.161**	-.462**	.475**	1
5-Happiness	3.58	.708	p	.014	.001	.000	.000	
			n	390	390	390	390	390

\*\*p<.01

Table 2 indicates that teachers' happiness levels have a positive and moderate correlation with transcendence ( $r=.349$ ;  $p<.05$ ), a positive and low correlation with harmony with nature ( $r=.161$ ;  $p<.05$ ), a negative and moderate correlation with anomie ( $r=-.462$ ;  $p<.05$ ), and a positive and moderate correlation with general SWB ( $r=.475$ ;  $p<.05$ ), all of which were statistically significant.

Table 3 presents that results of the multiple regression analysis conducted to determine the predictive power of teachers' SWB levels on their happiness levels.

Table 3  
*Results of the Regression Analysis Conducted to Determine How Well Spiritual Well-Being Predicts Teachers' Happiness Levels*

	Variable	B	Standard Error	$\beta$	t	p
Model I	Constant	3.322	.278		11.963	.000
	Transcendence	.245	.035	.303	7.041	.000
	Harmony with Nature	.026	.047	.024	.559	.577
	Anomie	-.400	.041	-.427	-9.830	.000

**R=.554; R<sup>2</sup>=.307; F= 56.974; p=.000**

Table 3 reveals that whereas transcendence and anomie are significant predictors happiness levels ( $p<.05$ ), harmony with nature is not ( $p>.05$ ). Both transcendence and anomie were found to explain 30% of the total variance in happiness levels ( $R=.553$ ;  $R^2=.30$ ;  $F= 85.456$ ;  $p=.05$ ). The  $\beta$  coefficient reveals that while anomie adversely affected teachers' happiness levels, transcendence had a positive effect on them.

We used Cohen's (1988)  $f^2$  as the criterion to calculate the effect size of the results of the multiple regression analysis. We used the formula  $f^2=R^2/(1-R^2)$  to calculate  $f^2$  values and considered  $.02 \leq f^2 < .15$  to constitute a small effect,  $.15 \leq f^2 < .35$  a

medium effect, and  $.35 \leq f^2$  a large effect for the purposes of our study (Cohen, 1988). Consequently, we calculated the  $f^2$  value to determine the effect size that SWB has on teachers' happiness levels. This study found that the effect size of teachers' SWB had a medium effect size of  $f^2 = .30 / (1 - .30) = .21$  on their happiness levels.

### Conclusion and Discussion

This study sought to analyze the relationship between teachers' spiritual wellbeing and happiness levels and has concluded that happiness is positively and significantly correlated with both transcendence and harmony with nature and negatively and significantly correlated with anomie. Both anomie and transcendence were both found to have a moderate impact on teachers' happiness, with anomie having a relatively greater effect. As teachers' transcendence levels increased, so did their happiness levels experience an increase whereas anomie had a detrimental effect on teachers' happiness levels.

In the literature, anomie is described as a societal erosion of cultural values, purpose, and desire to abide by society's rules that then leads to alienation, anarchy, and hopelessness (Bayhan, 1995). In other words, anomie means the weakening of the bond between an individual and society's rules or the lack of desire to follow these rules. Since anomie is detrimental to SWB (Şirin, 2019), we expected to identify a negative correlation between it and happiness. Transcendence is defined as an individual's submission to an entity more powerful than him/herself (Acar, 2016). Consequently, although anomie had a negative impact on teachers' happiness, it had a positive impact on transcendence. Though anomie did not have a significant effect on harmony with nature, this specific sub-dimension of well-being may be helpful in giving meaning to one's life. SWB generally depends on what one understands the meaning and purpose of life to be and on realizing that there is a greater power than oneself. An individual who has attained spiritual wellness is a person who is highly satisfied with life and who feels a sense of wholeness (Korkut-Owen & Owen, 2012). In the literature, Gardaş (2017) found there to be a negative correlation between narcissism and SWB whereas Holder, Coleman, and Wallace (2010) found a significant, positive correlation between spirituality and happiness. Brome, Owens, Allen, and Vevaina (2000) reported that individuals with high levels of spirituality are also highly satisfied with life. Fehring, Miller, and Shaw (1997), however, found spiritual wellness to have a positive and meaningful correlation with hope and positive emotions. Ivtzan, Chan, Gardner, and Prashar (2013), Jahan and Khan (2014), Yoon et al. (2015), and Saleem (2017) all found a positive and meaningful correlation between spirituality and psychological well-being. Cotton, Levine, Fitzpatrick, Dold, and Targ (1999) found that patients with high levels of SWB were more hopeful and were less likely to suffer from depression compared to those with relatively weaker SWB. In his study with oncology patients, Erdoğan (2019) concluded that as patients' spiritual wellness levels increased, they were

able to find greater meaning in life and suffered less from loneliness. Other studies have reported that having a relationship with nature had a favorable impact on individuals' happiness (Nisbet, Zelenski, & Murphy, 2011) and led to lower levels of depression (Zelenski & Nisbet, 2014). These findings support the notion that individuals' SWB levels impact happiness. In other words, SWB boosts positive emotions like happiness and may even mitigate negative emotions.

As this study was realized solely with teachers employed in Küçükçekmece, Istanbul, repeating this study with different sample groups in different regions and provinces while incorporating a greater number of variables and different descriptive techniques will aid in further expounding on our findings.

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Research Article

# Examining the Moderator Role of Gender in the Association Between Self-Reflection and Spirituality

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## Abstract

Spirituality and religiosity are increasingly becoming a necessity for each individual in supporting the quality and well-being of life. Student involvement in self-reflection affects their spirituality / religiosity. This study aims to determine the relationship between self-reflection and spirituality/religiousness (S/R), which is moderated by gender. This research uses a quantitative approach with a correlational design. The study sample consisted of 124 students with a mean age of 19.4 years. The total sample was obtained from 98 women and 26 men. Sample selected from students majoring in Elementary School Teachers (PGSD) in various semesters with a purposive sampling method. Measuring instruments used are the Ironson-Wood Spirituality/religiousness Index (IWSRI) and The Self-Reflection and Insight Scale (SRIS). Data analysis using Process Macros. The results showed that there was a significant effect of self-reflection on spirituality/religiousness ( $B = 0.669$ ;  $p = 0.000$ , ) and gender could not moderate the effect of self-reflection on spirituality/religiousness on students of Elementary School Teachers (PGSD) ( $B = -0.317$ ;  $p = 0.369$ ). Based on research conducted, it can be concluded that self-reflection significantly influences spirituality/religiousness, and gender is not able to strengthen or weaken the effect of self-reflection on spirituality/religiousness; thus, gender cannot become a moderator between self-reflection and spirituality/religiousness.

## Keywords:

Self-Reflection, Gender, Spirituality, Religiosity, Moderator Role

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Humans are created as beings who have an inner instinct that requires transcendence in life. The ability of humans to become transcendent beings is by increasing spirituality in themselves (Rassouljian, Seidman, & Löffler-Stastka, 2016). Many human beings have reached or fulfilled biological needs to the fulfillment of self-actualization needs but often feel the emptiness in their soul. Spirituality significantly influences the quality of human life (Counted, Possamai, & Meade, 2018). Spirituality has become a basic need for humans without exception. Spirituality is one of the integral parts of religiosity. Ironson, Solomon, & Med (2002) combine spirituality with religiosity, even though it is different. In practice, both spirituality and religion are going together, like a current program in education, namely increasing morality through increased spirituality by increasing the religiosity of teachers and students.

Teachers who devote themselves to educating humans need welfare and mental health. When teachers as educators already have good mental health and are aware of it, it can also affect the mental health of their students. Spirituality/religiousness (S/R) of teachers in Elementary Schools proven to have a positive effect on their welfare and mental health as teachers (Park, 2016). The mental health of elementary school teachers ultimately affects the mental health of the students they educate (Johal & Pooja, 2016). Meanwhile, various complex problems in education, such as the unequal distribution of teachers, the quality and quantity of teachers, then the learning difficulties experienced by students become stressors of the teachers and, if left unchecked, can be a trigger for mental illness. So improvements in spirituality can help to reduce the impact of these problems.

Spirituality and religiosity correlate the internal dialogue within individuals (Zarzycka & Puchalska, 2019), which means that individuals do self-reflection aimed to confirm what they believe in and to give instructions to themselves in their behavior. According to Malatji & Wadesango (2017), reflection is an active process to witness their own experience to take a closer look to draw attention briefly, but often for men to explore in more depth. It can be done in the middle of an activity or make it daily activities. The key to reflection is learning how to take the perspective of the action and experience themselves (Helyer, 2015). In other words, self-reflection function to examine the experience of self and not just simply undergo such experiences without meaning so that life becomes meaningful and mental health increases.

Spirituality and religiosity related to what is valued by individuals in doing something. The results of the study showed a relationship between mental health and spirituality/religiousness (Ironson, Cleirigh, & Costa, 2009). Besides, self-reflection is explicitly associated with spirituality and mental health (Tan, 2016). To improve spirituality/religiousness, especially in Elementary School Teachers (PGSD) students who will become educators, one of the efforts that need to be done is to determine the effect of self-reflection on spirituality/religiousness. Nevertheless, not much research

showed an interest in the influence of self-reflection and spirituality/religiousness. Therefore, this study seeks to examine the relationship between self-reflection and spirituality/religiousness moderated by gender.

### **Spirituality and Religiosity**

Distinguishing between religiosity and spiritual quality is not easy for monoculture in a cross-cultural country. Thoughts for centuries have not provided a standard depiction of the two concepts (Koenig, 2012). One difficulty is that the two concepts are interrelated and have general characteristics, both of which can involve personal transformation and the best search for truth (Ironson, Solomon, & Med, 2002). Religious people often define themselves as spiritual beings, so spirituality often includes religiosity, yet, spirituality is often described in broader terms.

Religion generally associates with certain fundamental principles organized in belief systems of different religious practices. Spirituality is more challenging to define, especially cross-culturally, because the character of the stick is not readily agreed, and that can mean something different for different individuals in different places (Koenig, 2012). Also, spirituality conveys the idea of personal search related to things that are sacred and transcendent (Rassoulian, Seidman, & Löffler-Stastka, 2016), while the level of religiosity worldwide often measured straightforwardly (Lucchetti, Lucchetti, & Vallada, 2013). For example, regarding the frequency of activities, such as ritual practices and presence in places of worship. Religious activities are also not always considered to occur. They are bound to individual official institutions when discussing spirituality because spirituality has taken on a more personal part and can occur inside or outside the formal institution of religion.

In many ways, religiosity is more accessible to measure than spirituality. The personal search in spirituality often includes indirect indicators, such as deep thoughts about self and other transcendental aspects (Zimmer, Jagger, Chiu, Ofstedal, Rajo, & Saito, 2016). This type of measurement shows the extent of spirituality. In some contexts, many people say that they reflect the meaning of life, meditate, or participate in ritual activities and do not say that they are in a specific religion. However, spirituality and religiosity are often considered together, especially when researching the steps of individual search relating to the meaning of life. Another ambiguity in distinguishing religiosity from spirituality is that both can involve contemplative activity. Religious activities can include prayer and preaching. The study of spirituality and health has expanded to consider the impact of non-meditation (Davidson et al., 2003). Hence, prayer can be considered as an internal conversation with the power of God. Then, there is meditation, which is considered as an effort of deep concentration by doing a more specific focus, such as on the breath, or an effort to have very conscious feelings, related to particular thoughts and experiences of a person. Also, like religion and spirituality,

there is a close relationship between prayer and meditation, so that both are thought to cause physical and mental relaxation (Ivanovski & Malhi, 2007). Therefore, some researchers like Ironson, Solomon, & Med (2002) combine spirituality with religiosity.

### Self-reflection and Spirituality/Religiousness

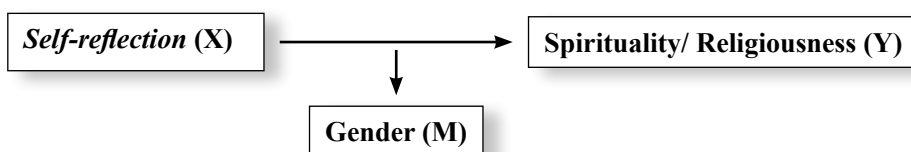
Reflection is an active process in witnessing the subjective experience alone with closer to direct others' attention briefly but is also often used for men to explore themselves more deeply (Malatji & Wadesango, 2017). Reflection can be done amid a particular activity and is made as an individual activity in daily life. The key to reflection is learning how to take perspective on one's actions and experiences. In other words, self-reflection is used to check each experience that must not only live it. The skill of reflection needed to analyze and prioritize having second thoughts, deepening self-based knowledge resources, and developing a plan into action. According to Bubnys (2019), reflection is not about one event at a time, but experiences that repeatedly occur when the teacher wants me to begin to construct meaning for them. Thus, the reflection process needs to be carried out continuously to obtain meaning in each experience of life. A reflective person can take responsibility (Lew & Schmidt, 2011). Therefore self-reflection is needed in thinking, feeling, and living various thoughts and actions in daily life, especially in the transcendent dimension, to create a meaningful atmosphere in every life experience.

### Self-reflection, Gender as a Moderator and Spirituality/Religiousness Variable

Every individual who performs self-reflection or self-reflection will have a higher spirituality and religiosity compared to those who do not perform self-reflection. When spirituality increases, mental health, and well-being will increase (Sood, Bakhshi, & Gupta, 2012). Spirituality/religiousness refers to beliefs and deeds based on beliefs such as the transcendent dimension of life.

Spirituality is something sacred in life due to the values of transcendence as well as its relationship with the Creator (Peterson & Seligman, 2004). Besides, gender, age, and culture can influence one's spirituality (Ironson, Cleirigh, & Costa, 2009). Therefore, this study wants to examine the relationship of self-reflection to spirituality, which is moderated by gender.

Figure 1:  
Thinking Framework



Purpose of the Study

The purpose of this study was to examine the positive relationship between self-reflection and spirituality/religiousness, while gender moderates the relationship between self-reflection and spirituality/religiousness among students at the University of Muhammadiyah Malang.

## Method

### Research Design

This research is the quantitative approach, namely correlational design that illustrates the research problem through a description of trends or the need for an explanation of the relationship between variables. Quantitative is a systematic approach that makes a statement of research objectives clearly, makes specific research questions and hypotheses, measurable, and observable (Creswell, 2012). In this study, a quantitative approach is used to determine the relationship between self-reflection and spirituality/religiousness, which is moderated by gender variables.

### Study Group

The research sample was taken using purposive sampling method. Several sample criteria have been set, such as the sample is students of the University of Muhammadiyah Malang majoring in Elementary School Teachers (PGSD) who are in semester I, III, V, and VII aged 18 years to 21 years amounted to 124 students. The study was conducted in the odd semester; the research subjects from Semester I to Semester VII were selected randomly. In detail, the participants include 27 students aged 18 years old, 39 students aged 19 years old, 37 students aged 20 years old, and 19 students aged 21 years old, while the sexes include 26 male students and 98 female students.

**Table 1.**  
*Characteristics of the Subjects (N = 124)*

Characteristics	N	%
Gender		
Male	26	20.97
Girl	98	79.03
Age		
18	27	21.77
19	39	31.45
20	37	29.84
21	21	16.93
Semester		
I	37	45.88
III	45	55.80
V	32	39.68
VII	10	12.40

## **Data Collection Tools**

The instruments used in this study were the Ironson-Wood Spirituality / Religiousness Index (IWSRI) to measure spirituality / religiosity and the Self-Reflection and Insight Scale (SRIS) to measure self-reflection. In addition, the Sociodemographic Information Form was used to collect information about the sociodemographic characteristics of the participants in the study group.

### **Ironson-Wood Spirituality / Religiousness Index (IWSRI)**

The Ironson-Wood Spirituality / Religiousness Index (IWSRI) measures spirituality/religiousness (S/R) in students (IWSRI) compiled and developed by Ironson, Solomon, & Med (2002). The IWSRI scale is a Likert scale type with five answer choices, namely strongly disagree (1) to strongly agree (5). The IWSRI scale consists of 25 items and is divided into four factors, namely peace, faith in God, religious behavior, and compassionate views on others. The first factor includes a sense of peace, which has three indicators, namely comfort, strength, and meaning (four items); feel right connections, not lonely (three-item); and existential/final life (two items). The second factor is about faith in God, which has two indicators, namely a view of God (two items) and somatic recovery/illness (four items). The third factor is religious behavior, which has five items. Then, the fourth factor is a compassionate view of others, which also has five items. High scores on the IWSRI scale indicate high spirituality/religiousness in students. Example statement: "My belief gives me peace." In the research trial, the IWSRI scale has a Cronbach internal consistency value of 0.936.

### **The Self-Reflection and Insight Scale (SRIS).**

The Self-Reflection and Insight Scale (SRIS) has three factors: the need for reflection, engagement in reflection, and insight. Self-reflection is measured by The Self-Reflection and Insight Scale (SRIS) developed by Grant et al. (2006). It is a Likert type scale with five choices of strongly disagree (1) to strongly agree (5). The SRIS scale consists of 20 items; six items measure individual involvement in self-reflection, six items measure individual needs for self-reflection, and eight items measure understanding. A high score indicates a high level of self-reflection and self- understanding. Example of the statement: "It's important for me to evaluate the things I'm doing." In the research trial, the SRIS scale has a Cronbach's internal consistency value of 0.643.

### **Sociodemographic Information Form**

The sociodemographic information forms used by participants in this study included age, gender, year of birth, faculty, department, semester, origins and religious beliefs.



### Data Collection Process

The data collection process in this study used questionnaires from The Ironson-Wood Spirituality/Religiousness Index (IWSRI) measures spirituality/religiousness (S/R) and The Self-Reflection and Insight Scale (SRIS) measures Self-Reflection. Data was collected from 9 December 2019 to 12 December 2019. Data collection was carried out in class during class hours by asking permission from the lecturer who was filling in the class. The data collection process was carried out for four days in various semesters. Each semester is represented by a class whose students are still learning in the classroom with the lecturer. Data collection on sample semester 1 on Monday, 9 December 2019. Data collection on sample semester 3 on Tuesday, 10 December 2019. Data collection on sample semester 5 on Wednesday, 11 December 2019. Data collection on sample semester 7 on the day Thursday, 12 December 2019. Each semester is represented by one class. Completing the questionnaire takes 20-30 minutes.

### Data Analysis

The data analysis is using SPSS 21 to test the relationship between independent variables and dependent variables with regression analysis. In contrast, process macros are used to test the function of moderator variables that function to strengthen or weaken the relationship between independent and dependent variables (Hayes, 2018).

## Results

Based on the results of data analysis, the self-reflection variable obtained  $SD = 7.5363$  with  $M = 68.871$  which means that the research subjects have an average level of self-reflection which is high and on the variable spirituality/religiousness obtained  $SD = 14.8517$  and  $M = 104.113$  which means that the subjects in this study have a high average of spirituality/religiousness.

**Table 2.**  
*Description of Research Variables*

Variable	SD	M
Self-reflection	7,5363	68,871
Spirituality/religiousness	14.8517	104,113

*Note:* SD = Standard Deviation; M = Mean or Average

In the gender variable, female students obtained  $SD = 0,62004$  with  $M = 4.1359$  while male students obtained  $SD = 0,47893$  with  $M = 4.2723$ . It indicates that spirituality/religiousness in men and women shows almost the same results.

**Table 3.**

*Mean values and standard deviations of spirituality/religiousness by sex (N = 124).*

Gender Variable	SD	M
Girl	0, 62004	4,1359
Male	0, 47893	4,2723

*Note:* SD = Standard Deviation; M = Mean or Average

The results of the data analysis test showed that there was a positive and significant correlation between self-reflection and spirituality/religiousness, indicated by the value of  $B = 0.669$  and  $p = 0.000$ , so it can be concluded that the first hypothesis was accepted namely the higher the student's self-reflection, the more spirituality/religiousness increase. On the contrary, the lower the self-reflection of students, the lower their spirituality/religiousness.

Then, it can be seen that gender in students is negatively correlated and not significant in the relationship between self-reflection and spirituality/religiousness, indicated by the value of  $B = -0.317$  and  $p = 0.369$ .

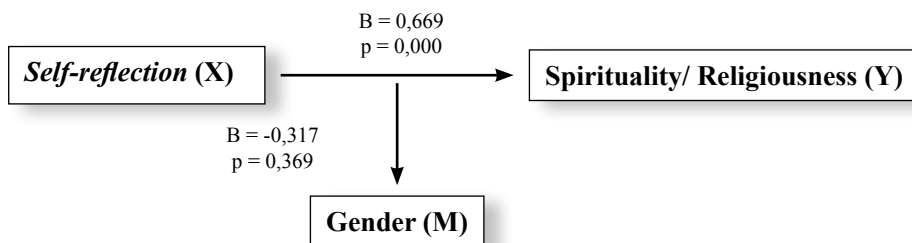
**Table 4.**

*Relationships Between Variables*

Relationship Between Variables	B	P.
Self-reflection spirituality/religiousness	.669	0,000
Self-reflection * Gender spirituality/religiousness	-0,317	.369

**Figure 2.**

*Results of Moderation of X Y and M*



The analysis shows that gender cannot be the moderator of the relationship between self-reflection and spirituality/religiousness in students. Gender cannot strengthen the relationship between self-reflection and spirituality/religiousness in students, so the results of the interaction between self-reflection and gender variables in students will not be followed by an increase in spirituality/religiousness.

**Figure 3.**  
Moderation Graph

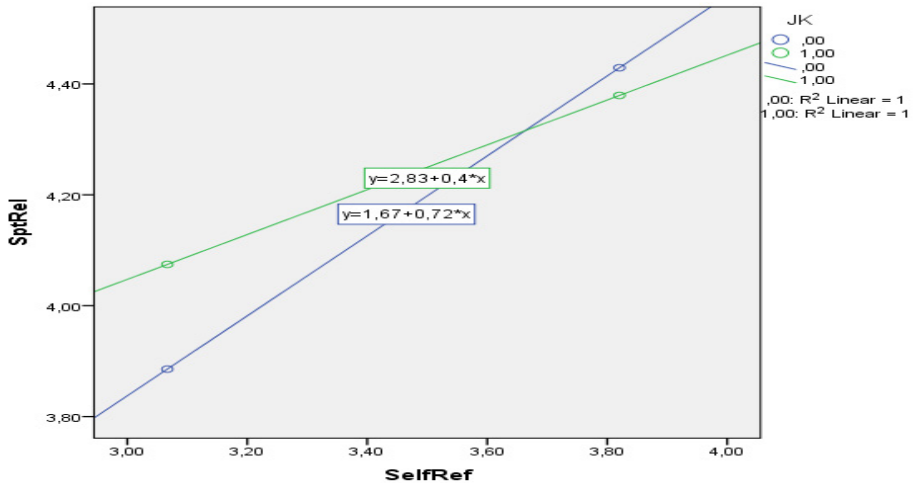


Figure 3 shows that positive relationships were found in both categories of male and female groups, that low self-reflection is indicated in the low spirituality/religiousness or high self-reflection is indicated by the high spirituality/religiousness. Both groups have a positive direction of relationship, so gender does not play a role as a moderator.

### Discussion

Based on the results of the moderation analysis, it is known that self-reflection and spirituality/religiousness have a significant effect, indicated by the value of  $p = 0,000$ , so that there is an effect of self-reflection on spirituality/religiousness. This is in line with Zarzycka & Puchalska's research (2019), showing that individuals who carry out internal dialogue that is also related to self-reflection correlate with spirituality/religiousness.

Based on the analysis results, it is known that gender is not able to moderate self-reflection on spirituality/religiousness. This is in line with the research of Polisetty et al., (2017) that men and women do not affect spirituality/religiousness so that they cannot predict the relationship of self-reflection on spirituality/religiousness. Several studies have shown that differences in spirituality/religiousness in men and women are small (Barkan & Greenwood, 2008).

Men and women mostly have the same strength of character in terms of creativity, curiosity, open-mindedness, learning, perspective, courage, perseverance, integrity, ability to live, love, kindness, social intelligence, citizenship, justice, leadership, compassion, humility, wisdom, ability to self-regulate, appreciate beauty or beauty, gratitude, have hope, ridiculing, and closeness to God. Most women have feelings of love, kindness, love attractiveness or beauty, and have a sense of gratitude higher

than men. Gender is not able to moderate without involving age and other types of measurements in strengthening the character of a child - a child, adolescent, and adult (Froh, Yurkewicz, & Kashdan, 2009).

Gender can moderate spirituality/religiousness if sex is seen from the personality owned and nationality. Both can be two sources that strengthen the spirituality/religiousness accepted by individuals (Ironson, Cleirigh, & Costa, 2009). Not only gender, but age also influences spirituality (Polisetty et al., 2017). Therefore, sex can be a moderator of the influence of self-reflection on spirituality/religiousness if put together with other variables.

Based on research conducted, it can be concluded that self-reflection significantly influences spirituality/religiousness, and gender is unable to strengthen or weaken the effect of self-reflection on spirituality/religiousness. This positive relationship was found in the group of men - men and women that the lack of self-reflection is indicated in the low spirituality/religiousness, or high self-reflection is indicated by the high spirituality/religiousness. Both groups have a positive direction to the relationship, so gender cannot act as a moderator.

In this study, gender is not able to strengthen or weaken the influence of self-reflection on spirituality/religiousness, while several research journals indicated that sex could become a moderate variable when going together with other variables. In determining the moderator variable, it is suggested for gender plus other variables such as age, social status, and culture.

For the next researchers, they are expected to define a more specific context in doing self-reflection so they could achieve more specific conclusions about the role of self-reflection in a specific context, such as in the context of teaching. Besides, it is to consider that spirituality/religiousness can occur conditionally; therefore, further researchers are expected to research at the right time. All individuals experience spirituality/religiousness at all education levels, so researchers can then examine other subjects at different levels of education and different majors.

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Research Article

# The Effect of Anger, Gratitude and Psychological Well-Being as Determinants of Forgiveness in Adults

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## Abstract

The purpose of this study is to examine the contribution of anger, gratitude and psychological well-being in predicting forgiveness. The study group consists of 221 adult (62 % female and 38 % male). Anger-Anger Style Scale, Gratitude Scale, Psychological Well-Being Scale and Heartland Forgiveness Scale were used as data collection tools. In analyzing the data obtained, Pearson moments correlation analysis and regression analysis were used. Research findings showed that there was a negative relationship between trait anger, anger-in sub-dimensions and forgiveness; there were positive relationships between the anger control sub-dimension, gratitude, psychological well-being and forgiveness. It has been determined that the common effects of these variables explain 42% of the variance of adults for forgiveness. In the light of the findings obtained from the research, suggestions for future research are presented.

## Keywords:

Adult, Anger, Gratitude, Psychological Well-Being, Forgiveness

## Yetişkinlerin Affediciliğinin Belirleyicisi Olarak Öfke, Şükran ve Psikolojik İyi Oluşun Etkisi

### Öz

Bu araştırmanın amacı, öfke, şükran, psikolojik iyi oluş değişkenlerinin yetişkinlerin affetme düzeyini ne derece yordadığını incelemektir. Araştırmanın çalışma grubunu, 138'i (% 62) kadın ve 83'ü (% 38) erkek olmak üzere toplam 221 yetişkin oluşturmuştur. Veri toplama araçları olarak Öfke-Öfke Tarz Ölçeği, Şükran Ölçeği, Psikolojik İyi Oluş Ölçeği ve Heartland Affetme Ölçeği kullanılmıştır. Elde edilen verilerin analizinde, Pearson momentler çarpımı korelasyonu analizi ve çoklu regresyon analizi kullanılmıştır. Araştırma bulguları, sürekli öfke ve öfke-içte alt boyutları ile affetme arasında negatif yönlü anlamlı ilişkiler; öfke kontrolü alt boyutu, şükran ve psikolojik iyi oluş ile affetme arasında pozitif yönlü anlamlı ilişkiler olduğunu göstermektedir. Söz konusu değişkenlerin ortak etkilerinin yetişkinlerin affetme düzeylerine ilişkin varyansının % 42'sini açıkladığı tespit edilmiştir. Araştırmadan elde edilen bulgular ışığında ileride yapılacak araştırmalar için öneriler sunulmuştur.

### Anahtar Kelimeler:

Yetişkin, Öfke, Şükran, Psikolojik İyi Oluş, Affetme

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Forgiveness is the act of curing and strengthening oneself by reconciliation with past. If we want to progress in this life feeling free, relieved and undaunted, forgiveness comes up as an option not an obligation (Sharma & Das, 2017). Reviewed in other disciplines, forgiveness is defined in psychology as “a deliberative decision to abandon one’s right to resentment, negative judgment and indifferent behavior toward one or group who unjustly hurt you” (Coyle & Enright, 1998). On the other hand, it is also entitled as cognitive, emotional and behavioral change of a person who experiences forgiveness as a process in an altruist aspect (McCullough & Witvliet, 2005). In short, forgiveness is defined as “a process of abandon the resentment and getting well” (Yıldız, 2017). In this process, negative emotions and thoughts towards others and oneself are gradually lessened (Safaria, 2014). Unforgiveness is a negative emotional state that a person feels hostility, resentment, anger and hate towards another who annoys him/her (Sharma & Das, 2017). Boleyn-Fitzgerald (2002) reported that forgiveness is “undisputedly the most important virtue to control anger”. Every individual experiences a sense of anger when they encounter situations that they are victims, hurt, blocked or under threat and oppression. Especially, one of the emotions experienced intensely during periods of conflict and resentment is anger (Nussbaum, 2016); because in such cases, the underlying emotions are primary emotions that cause anger, such as not being understood or injury (Hendricks, et al., 2013). Anger and primary emotions that produce anger arise and reinforce the belief that the situation is not as it should be. Therefore, very angry people are expected to have more difficulty in forgiveness. On the other hand, it can be said that as long as the anger and the underlying primary emotions decrease, it will be easier for individuals to forgive (Malakçıoğlu, 2018). Some studies showed that forgiveness reduces emotions such as resentment, anger, hostility, anxiety, but increases emotions such as love, happiness, hope, compassion and mercy (Enright & Fitzgibbons, 2015; Wade et al., 2014). If individuals can transform negative emotions and forgive, they contribute to their subjective well-being and therefore, they can take precautions against psychological disorders that may occur.

Gratitude is the attitude of accepting what a person takes from life and being grateful to life (Watkins et al., 2003). It is an action that adds beauty to life by appreciating simple events in life. It strengthens social relations, increases psychological well-being, improves optimistic behavior and strengthens the sense of commitment due to being a positive emotion (Fredrickson, 2004). According to Lyubomirsky (2008), gratitude is wondering, appreciating, seeing the beautiful side of negativity, recognizing abundance and richness and getting deep into them, thanking God or someone in our lives, being aware of and expressing the beauties (felicities) we have. Having the feeling of gratitude is an antidote to negative emotions for individuals and is an emotion that neutralizes negativity in such as jealousy, envy, ambition, hostility, anxiety and anger (Kardaş & Yalçın, 2018). Gratitude and forgiveness are



conceptually associated with psychological and physical health (Breen et al., 2010). Researches showed that as the level of gratitude increases, anger, loneliness and depressive symptoms decrease (Breen et al., 2010; Wu et al., 2018).

Psychological well-being requires competencies as self-acceptance in all aspects, the ability to establish positive relationships with others, purpose and meaning in life, being open to personal growth, autonomy/independence and environmental mastery (Ryff, 1989). Psychological well-being also expresses positive features such as nourishing of spiritual need, autonomy, independence, forgiveness, establishing close relationships with people and productivity (Güleç, 2016). Researches showed that individuals with high forgiveness also have high psychological well-being (Koç et al., 2016; Ma, Chen & Guo, 2019; Uysal & Satici, 2014). While unforgiveness is seen as an essential component of stress (Worthington & Scherer 2004); forgiveness can be a way to cope with interpersonal stress in a way that promotes positive harmony (Toussaint & Webb, 2005). Worthington, Witvliet, Lerner and Scherer (2005) have suggested that forgiveness can provide more well-being by alleviating the effects of stress and negative emotions and supporting a more harmonious response for the individual. Toussaint and Webb (2005) reviewed 18 studies examining the effects of forgiveness on mental health. In general, their findings showed that when it comes to forgiveness, anxiety, depression and anger have decreased. Krause and Ellison (2003) reported that there was a relationship between forgiving others and psychological well-being, especially older people who forgave others showed less depressive symptoms, less death anxiety and more life satisfaction.

As it can be seen from the studies, it is possible to say that forgiveness alone is a significant predictor of the relationship between anger, gratitude and psychological well-being variables, the decrease in the feeling of trait anger and the increase in the sense of gratitude and the psychological health (Topbaşoğlu-Altan & Çivitçi, 2017; Uysal & Akın, 2014; Zümbül, 2019). The purpose of this study is to examine the effects of anger, gratitude and psychological well-being on forgiveness, which are the variables whose relationships have not been considered together. With an uncontrollable destructive anger, it is very difficult to develop and settle positive emotions for the individual. On the other hand, emotions that affect an individual's well-being such as love, affection, and mercy are realized through forgiveness (Thompson et al., 2005). Unlike previous research, this research is considered important in terms of being grateful, well-being and controlling anger help to develop forgiveness. The findings obtained from the research are expected to contribute to the studies aimed at increasing the level of forgiveness of adult individuals and in the guidance and psychological counseling services offered to individuals. Besides, it is predicted that this research will help adult individuals to have the capacity to create healthier and satisfying interactions with a positive feeling, gratitude in a high

level of forgiveness by becoming individuals who can manage their anger in their relationships with themselves, their families and in business life. In line with these purposes, the following questions were sought in the research:

1. Is there a relationship between forgiveness, anger, gratitude and psychological well-being scores of adults?
2. What is the effect of anger, gratitude and psychological well-being scores to predict forgiveness scores?

### **Method**

Aiming to examine the variables of anger, gratitude and psychological well-being, which are thought to be the predictors of forgiveness in adults, this study is a descriptive research based on a relational screening model.

### **Participants**

The study group of the study consists of prospective teachers who got pedagogical formation training in Trakya University Faculty of Education in the 2017-2018 academic year. A total of 221 adult volunteers participated in the study, selected according to the appropriate sampling method. 166 of the participants (75%) were aged 24 and under, 55 (25%) were in the age range of 25 and above, 138 (62%) were female and 83 (38%) were male adults.

### **Data Collection Tools**

*The State - Trait Anger Scale:* The original version of the scale was developed by Spielberger (1983), and it was adapted into Turkish by Özer (1994). The scale has thirty-four items; the first 10 items measure the level of trait anger, 24 items determine the anger styles (anger-in, anger-out and anger-control sub-dimensions) of individuals. Total score cannot be obtained from the scale, scoring can be done according to the sub-dimensions. High scores obtained from the trait anger indicate that anger level is high; high scores obtained from the anger-in-scale indicate that anger is suppressed, held inside; high scores from the anger-out scale indicate that anger is easily expressed, and high scores from the anger-control scale indicate that anger can be controlled. Cronbach's alpha coefficients of the scale were found as 0.79 for the 'trait anger' dimension, 0.78 for the 'anger-out expression' dimension, 0.62 for the 'anger-in expression' dimension, and 0.84 for the 'anger control' dimension. Cronbach's alpha coefficients of scale for this research were found as 0.76 for 'trait anger' dimension, 0.79 for 'anger-out expression' dimension, 0.65 for 'anger-in expression' dimension and lastly 0.79 for 'anger control' dimension. The reliability coefficient of the scale in this study was calculated as .85 for trait anger dimension, .81 for anger-out expression, and .63 for anger-in expression.

*Gratitude Scale:* This 25-item scale was developed by Kardaş and Yalçın (2019). There are six sub-dimensions of the scale: Positive Social Comparison, Focusing on Positive, Appreciating contributions of Family and Others, Feelings of Abundance instead of Deprivation, Gratitude for Simple Things and Expressing Gratitude. As a result of confirmatory factor analysis, the fit values of the scale were found as  $\chi^2/Sd$  2.30; RMSEA 0.061, CFI 0.95, NFI 0.92, IFI 0.95, NNFI 0.94 and GFI 0. The internal consistency coefficient of total score of the scale was calculated as 0.88. The reliability coefficient of the scale in this study was calculated as .90.

*Psychological Well-Being Scale:* It was developed by Diener et al. (2010) in a shorter and more holistic way for the existing psychological well-being measurements. It was adapted into Turkish by Telef (2013). Cronbach's alpha internal consistency coefficient obtained in the reliability study of the scale was calculated as .80. As a result of the confirmatory factor analysis, when the fit indices were analyzed, it was observed that the ratio of chi-square value to degree of freedom ( $92.90/20=4.645$ ) was below 5. Other fit indices were found as RMSEA= 0.08, SRMR= 0.04, GFI= 0.96, NFI= 0.94, RFI= 0.92, CFI= 0.95 ve IFI=0.95. The items of the scale are scored 1 to 7 and the scores that can be obtained vary between 8 and 56. A high score indicates that the person has many psychological resources and strengths. The reliability coefficient of the scale was found as .86 for the sample group of this study. In this study, the reliability coefficient of the scale was calculated as .78.

*Heartland Forgiveness Scale:* The scale was developed by Thompson et al. (2005) to determine the level of forgiveness of the individual with 18-item. Its adaptation to Turkish culture were carried out by Bugay (2010). The scale has three sub-dimensions: forgiveness of self, forgiveness of others and forgiveness of situation.

A high score obtained from every sub-dimension and total score in the 7-point Likert-type (1-always wrong, 7-always correct) scale states that the level of forgiveness of the individual is high. In the Turkish version, Cronbach's alpha reliability coefficient overall was 0.81, for forgiveness of self-subscale 0.64, for forgiveness of others 0.79, and for forgiveness of situation 0.76. The reliability coefficient of the scale in this study was calculated as .82.

## Data Analysis

The data were analyzed using SPSS 21 program. Since the skewness and kurtosis values of the scale are between -3 and +3, normality has been provided and parametric test techniques have been used in the analysis. In the analysis of data obtained from the research, Pearson Moments Product Correlation Coefficient was calculated to examine the relationship between anger, gratitude, psychological well-being and forgiveness. Multiple regression test was conducted to examine the contribution of independent variables (anger, gratitude and psychological well-being) in predicting forgiveness.

## Findings

In this section, the sub dimensions of anger such as trait anger, anger-in, anger-out, anger control, gratitude and psychological well-being are regarded as independent variables, and forgiveness is a dependent variable. Descriptive statistics of arithmetic mean, standard deviation, skewness and kurtosis values related to the dependent and independent variables of the research were shown in Table 1.

Table 1.  
*Descriptive Statistics Related to Variables*

Variables	n	Minimum	Maximum	Mean	ss	Skewness	Kurtosis
Trait Anger	221	10.00	40.00	21.72	5.94	.629	-.143
Anger-In	221	8.00	30.00	16.54	3.71	.613	.773
Anger-Out	221	8.00	32.00	16.57	4.44	.700	.674
Anger Control	221	11.00	32.00	22.09	4.56	.088	-.266
Gratitude	221	46.00	125.00	97.42	13.12	-.777	1.322
Forgiveness	221	36.00	126.00	81.37	16.12	.104	-.062
Psychological well-being	221	20.00	56.00	44.20	6.20	-.871	1.259

The relationship between anger, gratitude, psychological well-being and forgiveness variables were examined with Pearson Moments Product Correlation Coefficient. The obtained data were shown in Table 2.

Table 2.  
*Correlation Related to the Relations between Dependent and Independent Variables*

	1	2	3	4	5	6	7
Trait Anger	1	.491**	.747**	-.449**	-.151*	-.517**	-.299**
Anger-In		1	.433**	-.033	-.187**	-.369**	-.245**
Anger-Out			1	-.440**	-.091	-.443**	-.149*
Anger Control				1	.138*	.429**	.252**
Gratitude					1	.329**	.504**
Forgiveness						1	.429**
Psychological well-being							1

According to Table 2, there was a weak negative relationship between trait anger and gratitude ( $r=-.151$ ;  $p<0.05$ ); a moderate negative relationship between forgiveness ( $r=-.517$ ;  $p<0.01$ ) and a weak negative relationship ( $r=-.299$ ;  $p<0.01$ ) between psychological well-being. There was a weak negative relationship between anger-in and gratitude ( $r=-.187$ ;  $p<0.01$ ); a moderate negative relationship between forgiveness ( $r=-.369$ ;  $p<0.01$ ) and a weak negative relationship between psychological well-being ( $r=-.245$ ;  $p<0.01$ ). There was a moderate negative relationship between anger-out and forgiveness ( $r=-.443$ ;  $p<0.01$ ); a weak negative relationship between

psychological well-being ( $r=-.149$ ;  $p<0.05$ ). It was also found that there was a weak positive relationship between anger control and gratitude ( $r=.138$ ;  $p<0.05$ ); a moderate positive relationship between forgiveness ( $r=.429$ ;  $p<0.01$ ); a weak positive relationship between psychological well-being ( $r=.252$ ;  $p<0.01$ ). It was seen that there were moderate positive relationships between gratitude and forgiveness and between psychological well-being ( $r=.329$ ;  $r=.504$ ). There was a moderate positive relationship between forgiveness and psychological well-being ( $r=.429$ ;  $p<0.01$ ).

The findings obtained from the regression test showing the level of predicting forgiveness of the independent variables anger, gratitude and psychological well-being were shown in Table 3.

Table 3.  
*Results of Regression Analysis Related to the Power of Anger, Gratitude and Psychological Well-Being Variables to Predict*

Dependent Variable	Independent Variables	Beta	t	p	R <sup>2</sup>
Forgiveness	Trait Anger	-.191	-2.222	.027*	.423
	Anger-In	-.155	-2.443	.015*	
	Anger-Out	-.090	-1.104	.271	
	Anger Control	.231	3.682	.000*	
	Gratitude	.132	2.185	.030*	
	Psychological Well-Being	.196	3.075	.002*	

Model:  $F=26.103$ ;  $p=.000$ ;  $*p<0.05$

The model formed according to the results of the regression analysis given in Table 3 is statistically significant ( $F=26.103$ ;  $p=.000 < 0.05$ ). Considering the standardized regression coefficients ( $\beta$ ) in order to see the variables respectively predicting the level of forgiveness in a statistically significant way, trait anger and anger-in dimensions negatively predicted the level of forgiveness ( $\beta=-.191$ ;  $\beta=-.155$ ;  $p<0.05$ ), while anger control dimension, gratitude and psychological well-being variables predicted the level of forgiveness in a positively significant way ( $\beta=.231$ ;  $\beta=.132$ ;  $\beta=.196$ ;  $p<0.05$ ). Trait anger, anger-in and anger control dimensions and gratitude and psychological well-being variables explained 42% of the change in forgiveness ( $R^2=.423$ ). While anger control dimension, which has the greatest regression coefficient, has the highest power to predict forgiveness ( $\beta=.231$ ), the smallest regression coefficient, gratitude has the lowest predictive power ( $\beta=.132$ ). Anger-out sub-dimension was not a significant predictor of the level of forgiveness ( $\beta=-.090$ ;  $\beta=-.155$ ;  $p>0.05$ ).

### Result, Discussion and Suggestions

In this study, the relationship of anger, gratitude and psychological well-being variables with forgiveness and their effects on forgiveness were examined in the light of national and international literature. According to the findings of the research related to the relationship between anger and forgiveness, it was found that there was

a negatively significant relationship between trait anger and anger-in and forgiveness. While there was no significant relationship between anger-out and forgiveness, a positive relationship was found between anger control and forgiveness. Most cross-sectional and longitudinal studies in the literature showed negative relationships between forgiveness and anger (Barber, Maltby & Macaskill, 2005; Fincham & Beach, 2002; VanOyen-Witvliet, Ludwig & Vander-Laan, 2001). In various samples, those reported with higher anger levels got lower scores on forgiveness scales (Berry et al., 2005; Moore & Dahlen, 2008; Rohde-Brown & Rudestam, 2011; Seybold, Hill, Neumann & Chi, 2001). Spielberger (1983) approached emotion of anger as state and trait, and while defined the state anger as the prevention or the severity of the emotion against injustice; trait anger explains as a concept that reflects how often state anger is experienced (Özer, 1994). Individuals with high trait anger levels experience state anger frequently and intensively (Deffenbacher, Oetting, Lynch & Morris, 1996). Expectedly, these individuals are less likely to regret and learn lessons from the negative experiences in which anger is expressed, and interpersonal problems are more common (Dilekler, Törenli & Selvi, 2014). Among individuals with low trait anger level, on the contrary, anger is expressed in a constructive way therefore interpersonal relations become more positive. According to the results obtained from the findings of the research, it can be said that as trait anger increases, forgiveness will be difficult. Therefore, reducing the level of anger and increasing anger control should be considered as a variable that can be functional in increasing forgiveness.

Similar to the findings of the research related to anger expression styles, Choi, Tae, Heo and Kim (2016) found a negative significant relationship between anger-in and forgiveness in their research on nurses, and it was reported that decreasing the anger level and increasing the level of forgiveness would enhance the quality of life among clinical nurses. If the person who keeps the anger in, namely suppresses the anger, can direct his/her attention to positive things, they can eventually transform it into more constructive behavior. As an inner process, in the core of forgiveness lies negative emotions to be transformed into positive emotions, the use of forgiveness interventions in the process is effective in reducing anger (Berry et al., 2005; McCullough et al., 2003; Zhang et al., 2019). However, for people whose anger is expressed, forgiveness may not be easy. Davies (2000) stated that when anger is suppressed internally, thoughts and moral judgments play roles, and when anger is suppressed externally, the consequences of this behavior play a role. When anger is not properly expressed, it goes up in time and causes to turn into feelings, thoughts and behaviors such as grudge, hate, hostility and revenge (Nakagawa et al., 2017). The results of studies of Vangelisti & Young (2000) and Bugay & Demir (2011) showed that the variables related to mistake – such as considering that the mistake was done deliberately, responsibility of the mistake, the results caused by the mistake, who have done the mistake- caused hostile feelings and reduced the forgiveness. Again, in the study of Yıldız (2017) with adolescents who had

delinquency problems, it was determined that the adolescents who were in the penal institution for the first time were more likely to forgive than those who were there more than once; the adolescents who had friends in prison had tendency of forgiveness in a distancing- getting away manner compared to those who did not have friends. Similarly to the finding that forgiveness will increase as the anger control skill of the individual increases, as a result of the studies of Kozan, Kesici and Baloğlu (2017), the university students whose anger control skill were low had also low level of forgiveness of self, others and situation. Positive and negative emotions play an important role in the process of forgiveness (Hodgson & Wertheim, 2007). Despite the rational relationship between anger and forgiveness, researches examining the relationship between anger management and forgiveness are more limited to suggest that forgiveness interventions can effectively reduce anger (Goldman & Wade, 2012; Welton, Hill & Seybold, 2008). On the contrary, there are very few studies that support the idea of adding the forgiveness intervention to the intervention methods related to anger management will increase the effectiveness. One of them is Ballard's study (2011) on the anger management practice with 187 people in a polyclinic center who experience anger problems. In the study, the counselees were randomly assigned to the usual anger management program and the anger management program integrated with forgiveness and participated in 90-minute group therapy once a week during 12 weeks. Research results showed that the integrated program reduced state anger and it was effective in increasing anger control and forgiveness.

Another finding of the study is that there is a positive significant relationship between gratitude and psychological well-being and forgiveness. Gratitude and forgiveness are defined as the strengths of "heart", they are key factors in determining the level of happiness, which are 'emotional' and 'interpersonal' in nature and play an important role (Park & Peterson, 2010; Safaria, 2014). As a result of the research of Satici, Uysal and Akın (2014) examining the mediating role of gratitude in the relationship of forgiveness and revenge, it was found that as forgiveness increased, feelings of revenge decreased and gratitude played an intermediary role in this increase. Accordingly, it can be said that gratitude contributes to the ability of forgiveness to transform negative emotions into positive emotions. There are studies reporting that gratitude is an important determinant of forgiveness (Breen et al., 2010; McCullough et al., 2002; Neto, 2007). On the other hand, there are opinions that both forgiveness and gratitude interventions can be beneficial to counselees as an intervention method, as well as emphasizing first gratitude then forgiveness can be more beneficial in the intervention (Toussaint & Friedman, 2009). However, more clinical studies and researches are needed on these issues. Just like gratitude, psychological well-being also nurtures positive emotions in individuals and thus, they feel satisfaction and happiness in their lives (Wulandari & Megawati, 2019). It can be said that individuals with high levels of psychological well-being are more forgiving than individuals with low levels. In a study of Asıcı (2018) on university

students, their level of forgiveness increased as the level of well-being, self-control, emotionality and sociality increased; well-being and self-control were found to be significant predictors of forgiveness. Many studies showing that there are significant relationships between forgiveness and psychological well-being of the individual can also be found in the literature (Alfonso & Datu; 2014; Koç et al., 2016; Mugrage, 2014; Zümbül, 2018).

As a result, the common effect of anger, gratitude, and psychological well-being variables explained 42% of the variance related to the level of forgiveness of adults. It can be said that when individuals control anger, which is a natural emotion, when they thank and feel psychologically good, their tendency and actions about forgiveness will increase. Considering the feature of forgiveness transforming negative emotions into positive emotions, it can be said that including interventions related to forgiveness in guidance and psychological counseling services is important. In addition to the use of these interventions solely, it is thought that including them in current intervention and prevention services in an integrative way will increase forgiveness.

In this research, the relationships between anger, gratitude and psychological well-being and forgiveness presented at significant level. Considering the impact of this research on psychologists, psychological counselors and educators working in the field of mental health, further studies are needed to examine the determinants of forgiveness. The study has certain limitations. These can be counted as data collection with measurement tools based on self-report on a small sampling, following a relational method and not putting forward causality. It can be suggested that considering these limitations, researchers shall be recommended to conduct different research methods on larger sample groups for future researches. In the framework of multicultural psychological counseling services, conducting relational and experimental studies about forgiveness on different cultures and beliefs are among the suggestions. There has been a growing interest in interventions related to positive psychology in recent years. It is foreseen that especially the techniques and methods related to forgiveness and gratitude will have an important place in psychological counseling.

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Since this study was conducted on the data collected before 2020, the ethical committee approval condition was not sought. However, the working stages comply with the principles set out in the Helsinki Declaration.



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# The Adaptation of the Moral Integrity Scale into Turkish and Analysis of the Psychometric Features\*

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## Abstract

The aim of this study is to adapt the Moral Integrity Scale developed by Schlenker (2008) to Turkish and conduct its psychometric analysis. The scale items were translated into Turkish by five specialists in the first place. After the language structure, culture suitability and understandability of the items were examined by the two experts, the items agreed upon were translated back to their original language by the two translation experts. After the positive evaluations of the experts, the final version of the scale items was decided. During the adaptation process of the study, data were collected from 470 people for exploratory factor analysis; from 248 people for confirmatory factor analysis and from 100 people for criterion validity. In this context, Exploratory Factor Analysis (EFA) was used to test the construct validity of the scale first. As a result of the exploratory factor analysis, it is seen that the moral integrity scale explains 52,127% of the variance as one dimension. Confirmatory factor analysis (CFA) was then performed to test the construct validity of the scale. The one-dimensional and 18-item structure of the Moral Integrity Scale was analyzed with DFA and accepted fit indices were obtained ( $\chi^2 / sd = 2.745$ ;  $p < .001$ ; RMSEA = 0.061; S-RMR = 0.051; NFI = 0.929; CFI = 0.954; GFI = 0.915; RFI = 0.919). In order to calculate the scale reliability, the Cronbach Alpha ( $\alpha$ ) internal consistency coefficients and the difference between the lower and upper scores of 27% were examined. For the Moral Integrity Scale, the internal consistency coefficient Cronbach's Alpha value was determined as 96.1. At the same time, the moral identity scale was used for criterion validity and a significant positive relationship was obtained with the two sub-dimensions of this scale. The total score obtained from the scale gives the person's moral integrity score. According to all these results, it is understood that the Moral Integrity Scale has sufficient validity and reliability values.

## Keywords:

Morality, Moral Integrity, Scale Adaptation, Factor Analysis, Moral Identity

## Ahlaki Bütünlük Ölçeği'nin Türkçe'ye Uyarlanması ve Psikometrik Özelliklerinin İncelenmesi

### Öz

Bu çalışmanın amacı, Schlenker (2008) tarafından geliştirilen Ahlaki Bütünlük Ölçeği'ni Türkçe'ye uyarlamak ve psikometrik incelemesini yapmaktır. Ölçek maddeleri ilk etapta, alanında uzman beş kişi tarafından Türkçe'ye çevrilmiştir. İki uzman tarafından maddelerin dil yapısı, kültüre uygunluğu ve anlaşılabilirliği incelendikten sonra üzerinde mutabık kalınan maddeler, iki çeviri uzmanı tarafından tekrar orijinal diline çevrilmiştir. Uzmanların olumlu değerlendirmelerinden sonra, ölçek maddelerinin son halinde karar kılınmıştır. Çalışmanı n uyarlama sürecinde, ilki açılımlı faktör analizi için 470 kişiden; ikincisi doğrulayıcı faktör analizi için 248 kişiden ve üçüncüsü ölçüt geçerliği için 100 kişiden veri toplanmıştır. Bu kapsamda ilk önce ölçeğin yapı geçerliğini test etmek amacıyla Açılımlı Faktör Analizi (EFA) kullanılmıştır. Yapılan açılımlı faktör analizi sonucunda ahlaki bütünlük ölçeğinin tek boyut olarak varyansın %52,127'sini açıkladığı görülmektedir. Ölçeğin yapı geçerliğini test etmek amacıyla daha sonra doğrulayıcı faktör analizi (DFA) yapılmıştır. Ahlaki Bütünlük Ölçeği'nin tek boyutlu ve 18 maddeli yapısı DFA ile analiz edilmiş ve kabul gören uyum indeksleri elde edilmiştir ( $\chi^2 / sd = 2.745$ ;  $p < .001$ ; RMSEA = 0.061; S-RMR = 0.051; NFI = 0.929; CFI = 0.954; GFI = 0.915; RFI = 0.919). Ölçek güvenilirliğini hesaplamak için Cronbach Alpha ( $\alpha$ ) iç tutarlılık katsayılarına ve %27'lik alt ve üst puanları arasındaki farka bakılmıştır. Ahlaki Bütünlük Ölçeği (ABÖ) için iç tutarlılık katsayısı Cronbach's Alpha değeri ,961 olarak tespit edilmiştir. Aynı zamanda ölçüt geçerliği için ahlak kimlik ölçeği kullanılmış ve bu ölçeğin iki alt boyutuyla anlamlı pozitif bir ilişki elde edilmiştir. Ölçekten elde edilen toplam puan kişinin ahlaki bütünlük puanını vermektedir. Tüm bu sonuçlara göre, Ahlaki Bütünlük Ölçeği'nin (ABÖ) yeterli geçerlik ve güvenilirlik değerlerine sahip olduğu anlaşılmaktadır.

## Anahtar Kelimeler:

Ahlak, Ahlaki Bütünlük, Ölçek Uyarlama, Faktör Analizi, Ahlaki Kimlik

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A commonly heard and discussed term is the notion of “morality.” This term is used by society in different ways. TDK (2019) describes ethics: “The behavior patterns and rules that people have to obey in society and the moral principles”. In other words, it is understood that it is interpreted as the pattern of action formed by the person according to the rules that exist in society. Morality, an Arabic origin word, is the plural of the word “hulk”. It means personality, temperament and character. (Bayraklı, 2011: 15). Morality was described by Aydın (2007) as performing one’s roles and duties towards himself and all things. Morality, at the same time, is the way cultures arrange their patterns of actions and interactions within the context of certain rules and values (Aydoğan, 2016). These definitions can generally be expressed as superficial definitions. As it is understood that morality has a very distinct position when looking at the debates about morality. To define Ghazali’s morality, Bardakoğlu (2007) said that morality is a faculty established in man and thanks to that, faculty behaviors emerge easily without the need for an intellectual force. What is said by morality here, to put it more clearly, can be expressed as being exempt from all sorts of impacts. In other words, it can be expressed as the personality and temperament that formed man. It is the science related to the moral features and actions that contribute to the concept of the person as good or bad and all the intentional actions that are uncovered by their effect (İslamansiklopedisi.org, 2019). Undoubtedly, the concept of morality is a widely discussed issue both in western and eastern societies. In this context, it is very important to consider the meaning attributed to morality by both sides and then examine what is meant by moral integrity.

The question of whether a person has moral integrity can play a central role in determining the value of any person’s character. In his definition of moral integrity Tamming (2017) expressed it with moral hypocrisy. Moral hypocrisy has been defined as “The desire to appear moral while acting according to one’s own interests, and therefore to avoid being immoral” (Batson, Kobrynowicz, Dinnerstein, Kampf and Wilson, 1999). This contrasts with the reality that being moral or moral dignity is a matter of fact. Experimental research with adults shows that people are more motivated and guided by moral hypocrisy than moral integrity. (Batson, Thompson and Chen, 2002). Moral honesty was described by Schlenker (2008) as the capacity to act principled when it is between the values and interests of one. Therefore, even though an individual has an interest, if an individual can show principled conduct, that person is identified as a person with moral integrity. Halfon (1986) claimed that integrity carried a more profound meaning rather than loyalty or keeping promises that sound moral and noble. He claimed that people with moral integrity often tend to remain in the background due to their character. According to certain philosophical patterns, the course of moral morality could vary. According to Kant, for example, people with moral honesty are consistent with their religious beliefs. According to utilitarians, the constant activity of acts according to the theory of

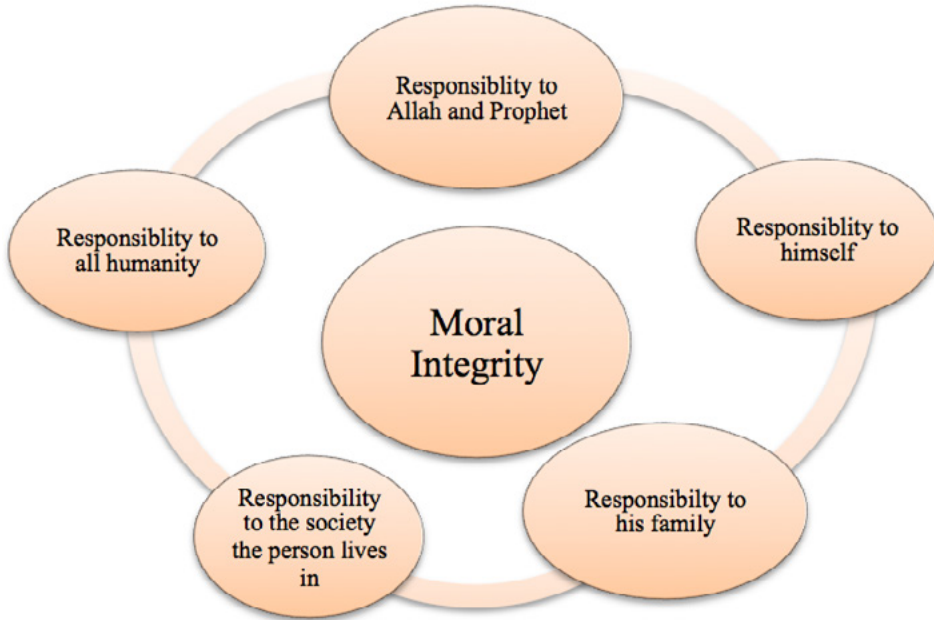
utilitarianism is moral integrity. This situation can be applied to the world-view of many philosophical ecoles (Halfon, 1989). Musschenga (2001) claims that, rather than private interests, individuals with moral integrity prioritize social interests; he claimed that this condition is evidence of the distinction between the individual who has moral integrity and the individual who does not. In other words, people with moral integrity look after others' rights ahead of their own rights and do not abuse others' interests for their own needs.

To some researchers, there is a difference between moral integrity and personal integrity. Although not all people who have personal integrity are supposed to display decency, people with moral integrity are expected to show fairness and consistency (Dunn, 2009). In his work, Furrow (2005) said that an assassin could display personal integrity, but this cannot be represented as moral integrity. In other words, the fact that the assassin does his job as a unit and harmony reflects his personal integrity, but actually shows that he does not show moral integrity. Dunn (2009) emphasized that in order to ensure moral integrity, the moral values of the person should be consistent with each other. Mcleod (2005) distinguishes personal integrity from moral integrity as follows; personal integrity is, according to him, the prototype of moral integrity if it carries moral values. Thus, it can be said that it is the path to moral integrity. When deciding on the moral integrity of a person, the first steps, to begin with, are basic virtues, principles and values which are considered necessary for the various social roles and examines how these manifests their behavior (Musschenga, 2001). It is really crucial to examine the way moral integrity is treated in the Islamic culture after these concepts.

In Islamic culture, the concept of moral integrity is commonly considered as the integration of the two significant concepts. According to Çağrıçı (2019), there are two forms of morality; the first is metaphysical (theoretical), and the second is practical moral. Theoretical (metaphysical) morality is the moral theory defining the foundations of human moral life, essential values, rules, and laws in society by examining the moral problems. Theoretical morality, in other words, is the theoretical aspect of morality that organizes the life of a human and allows him to differentiate between good and evil.

Deed Morality is “both the result and the application of the rules and laws determined by theoretical morality.” It is the application of the person's theoretic morals in other words. Moral integrity can be defined as the overlap of theoretical and moral deeds. In other words, it is the situation in which the man distinguishes between good and bad, and the mind brings these circumstances into action and actions, which knows what is right and what is wrong and evaluates what will result as a consequence of them. An individual with moral integrity who applies his theoretical morality at the level of deed (practical) morality is expected to have the following five traits.

**Figure 1.**  
*Responsibilities of the person who has moral Integrity*



These statements also mean that the person who has these features also has moral integrity. When these points are evaluated, it is understood that there are important common points between moral integrity and will. Moral integrity is undoubtedly a vital subject to be studied. Having a measurement scale that can assess people's moral integrity would make this condition easier for academics to analyze. The purpose of this study is to adapt the Moral Integrity Scale developed by Schlenker (2008) to Turkish culture.

### **Method**

This study is an adaptation study of the "Moral Integrity Scale" into Turkish. The scale was developed by Dr. Schlenker in 2008. The details of the adaptation process were given under this section.

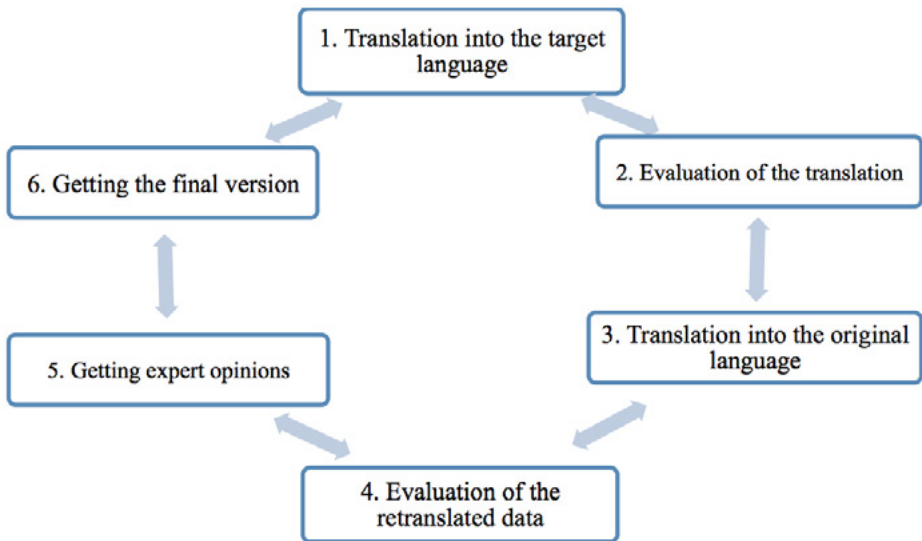
### **Design Pattern**

This study is an adaptation study carried with the descriptive scanning pattern of quantitative research to determine the psychometric properties of moral integrity. The aim of the quantitative studies is to define the phenomenon clearly. Additionally, researches such as skill tests and attitude tests, developed and/or adapted, are also included in the descriptive research groups (Büyüköztürk, Çakmak, Akgün, Karadeniz and Demirel, 2018). In descriptive scanning, the data provide untouched information.



## Sample Group

The sample of the study consists of three study groups taking courses in Marmara University Atatürk Education Faculty in the 2018-2019 academic year. Data were collected from the first group for exploratory factor analysis (EFA), from the second group for confirmatory factor analysis (CFA), and from the third group for criterion validity. For the exploratory factor analysis, data were collected from a total of 470 students, including 320 (68.0%) female students and 150 (32.0%) male students. For the confirmatory factor analysis, data were collected from 248 students, 172 (70.0%) female and 76 (30.0%) male students. Again, for the criterion validity of the scale, data were collected from 60 (60.0%) female students and 40 (40.0%) male students, 100 students in total.



Within the frame of steps in Figure 2, the scale was translated into Turkish by five English language experts who are unaware of each other. These translations were evaluated in many dimensions by two experts. These evaluations were carried in terms of structure, cultural appropriateness and understandability. The Turkish draft was formed as a result of some changes. Subsequently, the items in Turkish were translated into original language by two experts in the field. Items that were translated into both languages were evaluated and a consensus was reached on the scale items with a few minor changes. Later, the opinions of two experts who are fluent in the field and the English language were consulted, and they were asked to conduct an academic and linguistic analysis. As a result of the experts' positive evaluations, the final version of the scale items was decided.

### **Data Collection Tools**

For the criterion validity of the scale, Moral Identity Scale (SPS), which was adapted into Turkish by Yılmaz and Yılmaz (2015), was used.

### **Demographic Information Form**

In the scale adaptation process, the demographic information form was applied to the students with the items in order to determine the gender, departments and classes of the students.

### **Moral Identity Scale**

The original scale was developed by Aquino and Reed (2002) and was adapted into Turkish by Yılmaz and Yılmaz (2015). At the first step of the study, the researchers made a linguistic equivalence for the moral integrity scale and it was defined that the Turkish version of the scale corresponded to its original form. EFA was performed with the first data collected for the scale. The results of EFA show that the translated form also has two sub-scale structures as in the original form. The two sub-scale forms have also been verified with DFA and it means that the Turkish form of the Moral Integrity Scale (MIS) has structure validity. In order to test the compatibility of this structure with another related construct, the Maternal Behavior Rating Scale (MBRS) was used and the correlation values of MIS and MBRS were tested. As a result, an idea was obtained about concordance validity. In terms of reliability studies on MIS, the test-retest method was preferred. For this, two separate applications were carried to the same group at two-week intervals and the correlation values between the data obtained from these two applications were calculated. Internal consistency coefficient determination and test halving methods were used for the reliability of the measurements. At the final step, Corrected Item Total Correlations (CITC) were determined to understand whether the items of MIS have discrimination features. At the sub-scales, a t-test was conducted for Independent Groups for the groups with the highest and lowest scores at %27. The Turkish form of MIS will represent a two-factor structure as in its original form according to the results obtained at the end of all these experiments and can describe 53.22 percent of the overall variance with this form. Since the explained variance rate is higher than the unexplained variance rate (%46.78), this rate can be considered sufficient for a two-factor scale. The factor loads of the items in the Internalization sub-scale of MIS vary between .47 and .85, and this subscale can explain 35.68 percentage of the total variance. The symbolization subscale factor loadings of substances range between .63 and .83 and this subscale can explain 17.54% of the total variance. The fact that the items in the subscales of the MIS's have a factor load of .45 above and under the sub-scales. So, it meets the necessary criteria required to leave all items in the scale in the same

way. The Confirmatory Factor Analysis results for fit indexes of the scale,  $\chi^2 / df$  (49.59 / 33) = 1.50 ( $p = .03$ ); Comparative Fit Index (CFI) = .96; Non-normed Fit Index (NNFI) = .95; Redundancy Fit Index (IFI) = .96; Goodness of Fit Index (GFI) = .95 and Adjusted Goodness of Fit Index (AGFI) = .92 are the values showing the perfect fit. Root Mean Square of Approximate Errors (RMSEA) = .052; Normed Fit Index (NFI) = .91; Square Root of Standardized Residual Means (SRMR) = .057; Strict Normed Fit Index (PNFI) = .067 and Strict Goodness of Fit Index (PGFI) = .57 show good fit values. The moral identity scale consists of five-point Likert scale items.

### **Data Collection and Analysis**

The data of the study were collected by in the 2018-2019 education period after the participants were informed and their consent was taken. Since participant approval was obtained for data collection, ethics committee permission was not required. SPSS for Windows 22.0 and AMOS 20.0 package programs were preferred to analyze the statistical data gathered within the scope of the study. In order to define scale internal consistency, Cronbach Alpha coefficients were examined, Moral Identity Scale was used for criterion validity. The experts' opinions were taken into consideration for the content validity and both exploratory and confirmatory factor analysis were used for construct validity. For item distinctiveness, "Independent groups t-test was used between upper and lower groups.

### **Findings**

In this section, the adaptation process of the Moral Integrity Scale that is adapted within the scope of the research is discussed. The procedures and statistical information for the adaptation of the scale into Turkish are provided.

### **Findings Related to Linguistic Correspondence**

In the process of adapting the scale into Turkish, the statistical results of the item correlations regarding the responses given by the 36 person English user students to whom the scale was applied every two weeks are given in Table 1.

Along with this, the correlation between the Turkish and English forms applied every two weeks is defined as powerful and meaningful ( $r = .798$ ;  $p < .001$ ). The arithmetic mean values for the Turkish form was found 58.83, while it was found 61.16 for the English form. The relationship shows that both Turkish and English forms are understood by at similar levels by the students.

Table 1.  
*Comparison of Turkish and English Data of the Moral Integrity Scale*

Tr&Eng	N	Correlation	p
M1	36	,83	,000
M2	36	,81	,000
M3	36	,76	,000
M4	36	,75	,000
M5	36	,73	,000
M6	36	,76	,000
M7	36	,83	,000
M8	36	,78	,000
M9	36	,77	,000
M10	36	,86	,000
M11	36	,78	,000
M12	36	,82	,000
M13	36	,83	,000
M14	36	,86	,000
M15	36	,85	,000
M16	36	,88	,000
M17	36	,82	,000
M18	36	,72	,000

\*\*p<.001

### Validity

While adapting a scale, carrying out validity and reliability studies will help to look at it from a scientific perspective, as well as making the scale reliable. The findings of the validity of the scale adapted in this sense are outlined under this title.

### Structural Validity

Within the framework of the construct validity of the adapted scale, both exploratory factor analysis and confirmatory factor analysis have been used. In this context, Exploratory Factor Analysis (EFA) was used to test the construct validity of the scale. As a result of the exploratory factor analysis, it is found that the moral integrity scale explains 52.127 percentage of the total variance as one dimension and in Social Sciences, this value is acceptable. In Social Sciences, the variance explained is between %40 and %60 to be considered sufficient (Akdağ, 2011).

The KMO value was found ,964 as a result of the study. The KMO test is important for testing both whether the distribution is sufficient for factor analysis and whether partial correlations are small. KMO value is considered perfect as it gets closer to 1 and it is considered unacceptable if the value is under 0,50 (Büyüköztürk, 2015). Tavşancıl (2010) mentioned that The KMO value can be considered perfect if it is equal and above 0.90. A score that is equal to 0.80 and above is very good; 0.70 and 0.60 are average, and if the value is 0.50 and above, then it is bad. The KMO values of this study is found perfect with the score of (,964). However, according to

Bartlett's test applied, the values are found as 5096,801 ( $p < .000$ ). This shows that the values are significant and the data used are multivariate normally distributed.

Table 2.  
*Factor Loads of the Moral Integrity Scales*

Items	Factor Loads
m14	,877
m6	,835
m8	,814
m13	,809
m17	,807
m18	,806
m4	,776
m9	,743
m16	,705
m1*	,698
m2	,687
m11	,684
m12*	,681
m10	,645
m15*	,621
m3*	,601
m5*	,556
m7*	,533

\*Reverse Items

At the end of the applications, the single-factor structure of the scale is observed and the items of the subjected scale have high values (the lowest item load value is 0,533; the highest is 0,877). There are six reverse items in the scale (i1, i3, i5, i7, i12 and i15). The total score gathered from the scale gives the participant's moral integrity point. To test the validity of the scale of the structure, then confirmatory factor analysis (CFA) was performed. Findings regarding DFA are presented below.

The one-dimensional and 18-item structure of the Moral Integrity Scale was analyzed with CFA and accepted fit indexes were obtained ( $X^2/sd=2.745$ ;  $p < .001$ ;  $RMSEA=0.061$ ;  $S-RMR=0.051$ ;  $NFI=0.929$ ;  $CFI=0.954$ ;  $GFI=0.915$ ;  $RFI=0.919$ ). The appropriate values according to the Schermelleh-Engel et al. (2003) and the fit indexes of the study are listed in the table below.

Figure 3.

Confirmatory Factor Analysis Path Diagram for Moral Integrity Scale

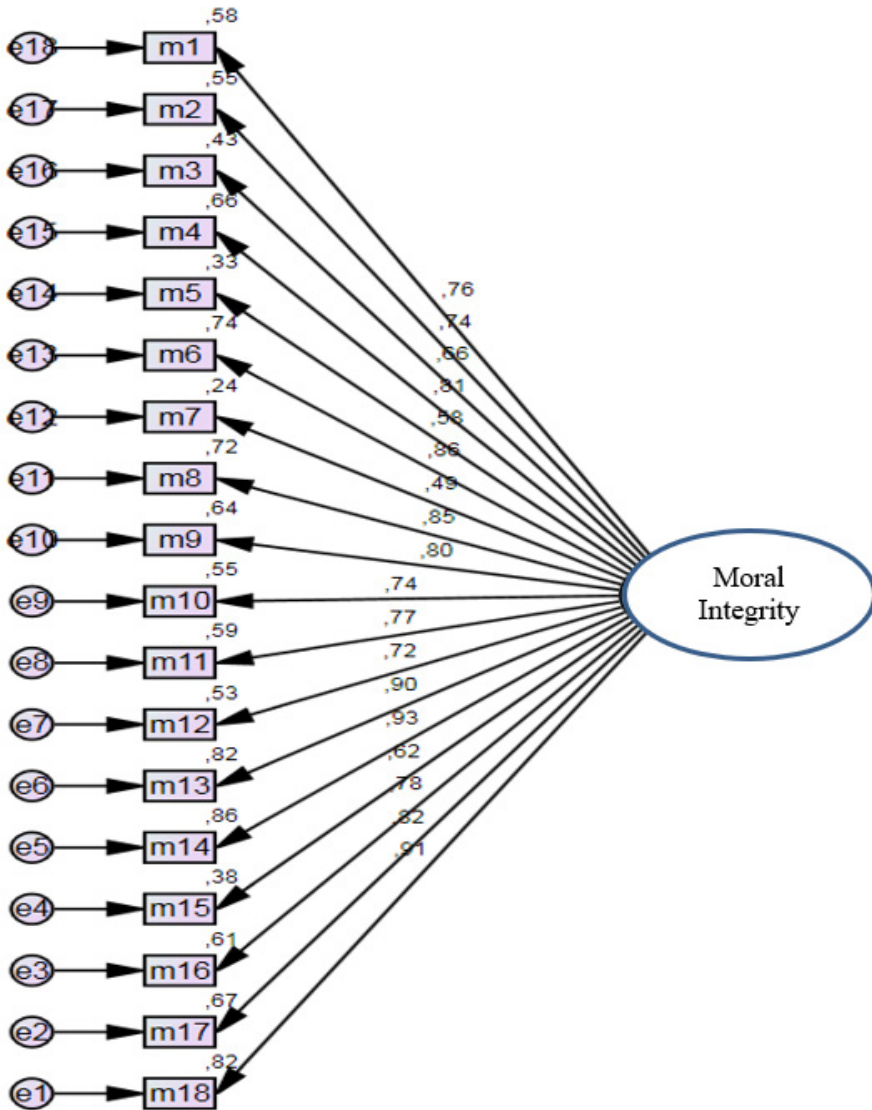


Table 3.  
*Comparison of Standard Goodness of Fit Criteria and Research*

Fit Criteria	Goodness Fit	Acceptable Fit	The Fit Values Obtained in the Research
c2/df	$0 \leq c2/df \leq 2$	$2 \leq c2/df \leq 3$	2.745
RMSEA	$0 \leq RMSEA \leq 0.05$	$0.05 \leq RMSEA \leq 0.08$	0.061
SRMR	$0 \leq SRMR \leq 0.05$	$0.05 \leq SRMR \leq 0.10$	0.51
NFI	$0.95 \leq NFI \leq 1.00$	$0.90 \leq NFI \leq 0.95$	0.929
CFI	$0.95 \leq CFI \leq 1.00$	$0.90 \leq CFI \leq 0.95$	0.954
GFI	$0.90 \leq GFI \leq 1.00$	$0.85 \leq GFI \leq 0.90$	0.915
RFI	$0.90 < RFI < 1.00$	$0.85 < RFI < 0.90$	0.919

### Criterion validity of the Scale

Moral Integrity Scale (MIS) was applied to 100 university students to determine the criterion validity of the scale. The literature review supports that Moral Integrity and Moral Identity have some shared situations and that's why the Moral Identity Scale was preferred to be applied. In order to define the criterion validity of the scale both sub-dimensions of the moral identity were used.

Table 4.  
*The Relation Between Sub-Scales of Moral Integrity and Moral Identity*

Variables	1	2	3
1. Moral Integrity	1,00		
2. Internalization	,669**	1,00	
3. Symbolization	,419**	,448**	1

\*\* $p < ,001$

The analysis shows that there is a positive and meaningful relation between sub-scales of the moral integrity and moral identity ( $r_1 = ,669^{**}$ ;  $r_s = ,419$ ;  $p < ,001$ ).

### Reliability

To calculate the scale reliability, Cronbach Alpha ( $\alpha$ ) internal consistency coefficients and the 27% difference between the upper and lower scores were examined. The related findings of the analysis were presented under this title.

The internal consistency coefficient Cronbach Alpha's value for the Moral Integrity Scale (MIS) was found as .961. In Social Sciences literature, the generally accepted value is to be .70 and above (Büyüköztürk, 2015). These results can be considered as good in terms of the reliability of the items of the Moral Integrity Scale items adapted to Turkish.

Table 5.  
*t-Test Results of the Lower and Upper Groups with %27 Scores of the Moral Integrity Scale*

Point	Groups	N	X	ss	Sh <sub>x</sub>	t	P
Moral Integrity	Upper	125	82,4640	3,90728	,34948	235,964	,000
	Lower	125	52,3520	15,84107	1,41687		

The independent groups' t-test that was conducted between the upper and lower scores of the moral integrity in order to determine the difference between the groups shows that there is a meaningful relationship between the groups ( $p < .000$ ). When the obtained result is examined, it is seen that the moral integrity scale is successful in distinguishing the difference between the upper and lower groups.

## **Results and Discussion**

Moral integrity is considered as the ability to act principled in times of conflict between the interests and principles of the person. This conception has become more important due to the situations that people confront in today's society and social life. It is a known fact that there are problems and complaints at every and each layer of the society related to this issue. Therefore, studies considering this term has gained more importance recently.

The aim of the study is to adapt the Moral Integrity Scale into Turkish. In order to achieve this goal, the scale translated into Turkish and a linguistic equivalence study was carried with the help of experts. Then the translated items were applied for the scale adaptation and as a result of the analysis, it was found that the scale is suitable for the Turkish language. Confirmatory analysis (CFA) and exploratory factor analysis (EFA) were applied to construct the validity of the adapted scale. Exploratory Factor Analysis (EFA) was preferred to test the construct validity of the adapted scale. The results of the EFA showed that the Moral Integrity Scale could explain %52.127 of the variance as one dimension. This value is among the acceptable values in Social Sciences literature. In order to have a fair value, the score should be between %40 and %60 of the exploratory variance (Akdağ, 2011). The KMO value of the scale was found as .964. KMO test is crucial for defining whether the distribution is sufficient for factor analysis. It is also significant for determining whether the partial correlations are small or not. As the value of KMO gets closer to 1, it is considered perfect and it is unacceptable if the value is below 0.50. Tavşancıl (2010) stated that 0.90 and above is excellent, 0.80 and above is very good, 0.70 and 0.60 are average and 0.50 and above is bad. The KMO value obtained from this research was found to be excellent (, 964). The Barlett's test score results are found 5096,801 ( $p < .000$ ). Results of the applied analysis revealed one-factor structure of the scale and the items of the scale were found to have high values (the lowest factor load is found as 0,533; the highest value is found 0.877). The number of reverse items in the scale is six (i1, i3, i5, i7, i12, and i15).

The total score gathered from the scale gives the moral integrity point of the participant. One dimensioned and 18-item-structured Moral Integrity Scale was analyzed by the Confirmatory Factor Analysis (CFA) and acceptable fit indexes have



been obtained at the end of the analysis ( $X^2/sd=2.745$ ;  $p<.001$ ;  $RMSEA=0.061$ ;  $S-RMR=0.051$ ;  $NFI=0.929$ ;  $CFI=0.954$ ;  $GFI=0.915$ ;  $RFI=0.919$ ). At the end of the analysis, a crucial and positive relationship was obtained between the two-dimensions of the moral identity scale, which was used for criterion validity, and moral integrity. All of these results show that the adapted Moral Integrity Scale (MIS) is appropriate to Turkish culture and can be considered as reliable and valid to be applied in Turkish contexts. The total score gathered from the Moral Integrity Scale items structured in the form of Five-Likert type, gives the moral integrity score of the participant. At the same time, it is seen that this scale has sufficient validity and reliability values in the context of a university sample. As a result, it is considered that the Moral Integrity Scale (MIS), which was adapted into Turkish, will be useful measurement tool for educators, researchers and other disciplinary professionals. The following suggestions can be made within the scope of the study:

- In this study, the population sample consists of university students. The scale can be applied for different populations and samples to contribute to the validity and reliability of the scale.
- It can be applied to the groups that have more participants in number and related knowledge about their moral integrity can be obtained.

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Research Article

# Examining the Relationship between Fear of COVID-19 and Spiritual Well-being

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## Abstract

The continuing spread of the COVID-19 (coronavirus) pandemic has psychological effects on many individuals. One of these effects is the fear of COVID-19. In this study, it is aimed to examine the fear of COVID-19 in terms of spiritual well-being. In addition, the fear of COVID-19 was examined within the framework of gender, age range, education, income level, whether there is someone diagnosed with COVID-19 nearby and marital status. The study group of the research consisted of 474 adults (261 females, 213 males) were selected by the convenient sampling method. The research method is the correlational survey model. Data was obtained using the Demographic Information Form, the Spiritual Well-being Scale, and the COVID-19 Fear Scale. Descriptive statistics, t-test for independent groups, ANOVA, Pearson Correlation test and regression analysis were used in the study. Group comparison analysis revealed that women experienced higher levels of fear of the coronavirus. While those with postgraduate education reported significantly lower levels of fear of the coronavirus than those with other education levels. Fear of the coronavirus did not differ according to the age range, income level, and marital status of the participants. According to the results of the correlation analysis, a negative correlation between the fear of coronavirus and spiritual well-being and sub-dimension of spiritual well-being "transcendence" was found; and a positive correlation between the fear of the coronavirus and the sub-dimension of spiritual well-being "anomie" was found. Regression analysis showed that "anomie" positively predicted the fear of coronavirus. The findings of the research were discussed within the scope of the related literature.

## Keywords:

COVID-19 • Fear of COVID-19 • Spiritual Well-Being • Transcendence • Anomie • Turkey

## COVID-19 Korkusu ile Spiritüel İyi Oluş Arasındaki İlişkinin İncelenmesi

### Öz

Dünyada yayılmaya devam eden COVID-19 (Yeni Coronavirüs) pandemisinin birçok birey üzerinde psikolojik etkilerinin olduğu görülmektedir. Bu etkilerden biri de COVID-19 korkusudur. Bu çalışmada COVID-19 korkusunu spiritüel iyi oluş açısından incelemek amaçlanmıştır. Ayrıca COVID-19 korkusu cinsiyet, yaş aralığı, eğitim, gelir seviyesi, yakınında COVID-19 tanısı alan birinin olup olmadığı ve medeni durum değişkenleri çerçevesinde de incelenmiştir. Araştırmanın çalışma grubu uygun ve kolay ulaşılabilir örneklem yöntemi ile seçilen 474 (261 kadın, 213 erkek) yetişkin bireyden oluşmuştur. Araştırma yöntem olarak ilişkisel tarama modelidir. Veriler Demografik Bilgi Formu, Spiritüel İyi Oluş Ölçeği ve COVID-19 Korkusu Ölçeği kullanılarak elde edilmiştir. Araştırmada tanımlayıcı istatistikler, bağımsız gruplar için t testi, ANOVA, Pearson Korelasyon testi ve regresyon analizi yapılmıştır. Grup karşılaştırma analizleri kadınların daha yüksek koronavirüs korkusu bildirdiklerini ortaya koymuştur. Lisansüstü eğitilmiş olanlar diğer eğitim düzeylerine sahip olanlara göre anlamlı ölçüde daha düşük koronavirüs korkusu bildirirken, koronavirüs korkusu katılımcıların yaş aralığına, gelir seviyesine, medeni durumuna göre farklılık göstermemiştir. Korelasyon analizi sonuçlarına göre, koronavirüs korkusu ile spiritüel iyi oluş ve spiritüel iyi oluşun alt boyutu "aşkınlık" arasında negatif korelasyon; spiritüel iyi oluşun alt boyutu "anomi" arasında pozitif korelasyon bulunmuştur. Regresyon analizi, "anomi"nin koronavirüs korkusunu pozitif yönde yordadığını göstermiştir. Araştırmanın bulguları ilgili alan yazın çerçevesinde tartışılmıştır.

### Anahtar Kelimeler:

COVID-19 • COVID-19 Korkusu • Spiritüel İyi Oluş • Aşkınlık • Anomi • Türkiye.

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COVID-19, which was detected in China at the end of 2019 was declared as a pandemic by the World Health Organization (WHO) on 11<sup>th</sup> March, 2020. This pandemic has affected many countries, including Turkey. As of 24<sup>th</sup> October, 2020, 42.055.863 confirmed cases and 1.141.567 deaths were reported worldwide. 357.693 confirmed cases and 9.658 deaths were reported in Turkey (World Health Organization, 2020).

There are many studies on the negative psychological effects of the pandemic in many countries that were affected by the it (Cao et al., 2020; Chen et al., 2020; Chew et al., 2020; Lopes & Jaspal, 2020; Meng et al., 2020; Shevlin et al., 2020; Soraci et al., 2020; Tan et al., 2020; Wang, Horby, et al., 2020; Wang, Pan, et al., 2020; Yang et al., 2020; Zhang et al., 2020). Studies showed that pandemic causes anxiety (Asmundson & Taylor, 2020; Jungmann & Withhöft, 2020; Li et al., 2020; Moghanibashi-Mansourieh, 2020; Nemati et al., 2020; Roy et al., 2020; Shanafelt et al., 2020; Talidong & Toquero, 2020); anxiety and depression (Huang & Zhao, 2020; Ozamiz-Etxebarria et al.2020; Özdin & Bayrak Özdin, 2020; Pappa et al., 2020) and fear in individuals (Ahorsu, et al., 2020; Doshi et al., 2020; Guan et al. ., 2020; Haktanir et al., 2020; Huang et al., 2020; Ornell, et al., 2020; Pakpour & Griffiths, 2020; Satici et al., 2020).

In Spain, one of the countries most affected by the pandemic, Ozamiz-Etxebarria et al. (2020) examined adults' level of anxiety, stress, and depression. Although symptom levels were generally low at the onset of the pandemic alert, young individuals with chronic diseases reported more symptoms than the rest of population. The study also reported higher levels of symptoms after an order to stay home. In England, Shevlin et al. (2020) found higher levels of anxiety, depression and trauma symptoms compared to previous population studies. In Turkey, Satici et al. (2020a) reported that fear of COVID-19 increases depression, anxiety and stress, and decreases life satisfaction. In China, Bo et al. (2020) conducted a study on COVID-19 patients. According to the findings of this study, it was found that most of the patients had significant post-traumatic stress symptoms before discharge from hospital.

Transmission of the COVID-19 pandemic, the uncertainty over patient outcomes, practices such as physical and social isolation to protect the health of the public and the news in printed, visual and social media covering the number of COVID-19 infected individuals and deaths induced fear in many people around the world. (Guan et al., 2020; Huang et al., 2020; Pakpour & Griffiths, 2020). The literature on the virus outbreaks in history has highlighted the negative psychosocial consequences of fear in terms of increasing the harm of an infectious disease (eg, Pappas et al., 2009).

Fear is an unpleasant mood that is triggered by the perception of a threatening stimuli. It is represented by facing with immediate, concrete and overwhelming physical danger (Smith et al., 2014). Fear is a widely researched psychological construct,

and dozens of psychometric ‘fear scales’ that assess individuals’ level of fear of many different things have been developed (Pakpour & Griffiths, 2020).

To understand the psychological implications of a pandemic, emotions such as fear and anger need to be considered and observed. In other words, it is important to evaluate fears. It will not be known whether education and prevention programs are necessary and which groups these programs will target (Pakpour & Griffiths, 2020) without having knowledge about the levels of fear based on different socio-demographic variables (e.g., gender, age, education, religiosity, etc.). Therefore, Ahorsu et al. (2020) developed the COVID-19 Fear Scale to help assess the level of public fear during COVID-19. Satici et al. (2020a) adapted this scale to Turkish. In this context, Üsküdar University Epidemiological Research Group (2020) researched in which ways the fears, anxieties and perceptions of process management of the community affected the psychological maturity level of the community in Turkey that was affected by this outbreak. As a result, it was found that 49% of women and 35% of men were afraid of the coronavirus in a way that would affect their lives. Despite these fears and concerns, it was found that the majority of the participants reported psychological maturation. Satici et al. (2020b) examined the relationship between intolerance to uncertainty and mental well-being; and the mediating role of the fear of COVID-19, and rumination in this relationship. Results showed that intolerance to uncertainty has a significant and direct effect on mental well-being. It was revealed that the fear of COVID-19 and rumination together turned out to have a serial mediating effect on the relationship between intolerance to uncertainty and mental well-being.

It can be said that the COVID-19 pandemic caused some kind of mental trauma in humans. In traumatic situations, some individuals seek a new sense of meaning and purpose in their lives, while others think that life is empty and meaningless due to stress, existential uncertainty, and endurance (Smith, 2004; Tedeschi & Calhoun, 1995). In such times, spiritual well-being and spiritual practices are seen as important components in almost all cultures. Spiritual well-being helps individuals to cope with stressful life events (Bekelman et al., 2009; Dalmida et al. 2011; Jahani et al., 2014; McNulty, Livneh, & Wilson, 2004; Uğurluoğlu & Erdem, 2019). Spiritual well-being is defined as a continuous and dynamic reflection on the individual’s spiritual health and maturity; emphasises two dimensions: religious and existential (Ellison, 1983). Religious well-being refers to the relationship with a supreme power / God, and existential well-being is interpreted as trying to understand the meaning and purpose of life (Ellison, 2006). Studies have found that spiritual well-being is negatively associated with fear of death (Chung et al., 2015), and positively associated with health-related quality of life (Dalmida et al., 2011). Uğurluoğlu and Erdem (2019) found that the level of spiritual well-being has a positive effect on the post-traumatic growth of individuals. Spirituality includes the elements of hope, meaning of life, prayer, unity

and connection with nature, belief in the existence of a supreme power, and transcendence (Dein, 2013; Moreira-Almeida & Koenig, 2006; Myers et al., 2000).

Shaw et al. (2005) reviewed 11 studies investigating the relationship between posttraumatic growth and religion/spirituality. As a result, three main findings have been detected. First, religion and spirituality are generally beneficial to people after trauma; second, traumatic experiences can lead to deepening of spirituality; third, it was concluded that positive religious coping, religious openness, religious participation, inner piety, and readiness to face existential questions are associated with post-traumatic growth.

Kluge, WHO Regional Director for Europe, stated that how we manage and react to this stressful situation that occurs so rapidly in our lives in such a pandemic environment is a big problem we face (Kluge, 2020). Therefore, studying the fear of COVID-19, one of the psychological effects of the pandemic, and spiritual well-being as a coping strategy together in times of trauma are thought to be important in explaining how people cope with a such trauma.

In this study, it is aimed to examine the fear of COVID-19 in terms of spiritual well-being and various socio-demographic variables. As mentioned above, in order to understand the psychological reflections of a pandemic, it is important to evaluate the fear according to different demographic variables (e.g., gender, age, education, occupation, marital status, religiosity, etc.). Thus, research data is needed to develop evidence-based strategies. In this way, it can be predicted which psychosocial and prevention programs will be required and which groups these programs will target.

## **Method**

### **Research Model**

In this study, correlational survey model was used to reveal the relationships between fear of COVID-19 and spiritual well-being as well as fear of COVID-19 and some demographic variables (e.g., gender, age, education, occupation, marital status, relatives diagnosed with COVID-19) (Büyüköztürk et al., 2010)

### **Study Group**

The study group of the research consisted of 474 participants who are convenient and accessible (Gravetter & Forzano, 2012). The data were collected using the Google Forms service via social media. The data was collected between 21<sup>st</sup> and 30<sup>th</sup> July, 2020. Participants' written informed consent was taken before data collection. The general characteristics of the participants are presented in Table 1.

Table 1.  
*General Characteristics of Participants (N = 474)*

Characteristics	Category	n(%)
Gender	Female	261(55.1)
	Male	213(44.9)
Age range	18-25	84(17.7)
	26-40	248(52.3)
	41-55	123(25.9)
	Above 55 years of age	19(4.0)
Education	Primary school <sup>a</sup>	57(12.0)
	High school <sup>a</sup>	66(13.9)
	Undergraduate <sup>a</sup>	279(58.9)
	Postgraduate <sup>b</sup>	72(15.2)
Profession	Officer	183(38.6)
	Employee	53(11.2)
	Craft	51(10.8)
	Student	57(12.0)
	Other (unemployed and housewife)	130(27.4)
Economical situation	Low	37(7.8)
	Middle	414(87.3)
	High	23(4.9)
Marital status	Married	319(67.3)
	Single	155(32.7)
A relative diagnosed with COVID-19	Yes	76(16.0)
	No	398(84.0)

According to Table 1, study group consists of 261 (55.1%) female and 213 (44.9%) male participants. Eighty-four (17.7%) participants from the study group are between the ages of 18-25, 248 (52.3%) are between the ages of 26-40, 123 (25.9%) are 41-55, and 19 (4%) were 56-years and over. In terms of the level of education, 57 (12%) participants are primary education graduates, 66 (13.9%) are high school graduates, 279 (58.9%) have a bachelor's degree and 72 (15.2%) have postgraduate degree. In terms of the professions they have, 183 (38.6%) participants are officer, 53 (11.2%) are employee, 51 (10.8%) are tradesmen, 57 (12.0%) are students, and 130 (27.4%) marked the other option (unemployed, housewives, etc.). In terms of economic status, 37 (7.8%) people reported low income, 414 (87.3%) reported middle income, 23 (4.9%) reported high income. In terms of marital status, 319 (67.3%) of the participants are married and 155 (32.7%) are single. The number of people reporting that they have an acquaintance who was diagnosed with COVID-19 was 76 (16%), 398 (84.0%) reported that they do not have an acquaintance who was diagnosed with COVID-19.

### Acknowledgment

Ethics approval was obtained from the Scientific Research and Publication Ethics Board of Istanbul 29 Mayıs University to conduct the study (Decision No: 2020 / 02-01).

## Data Collection Tools

**Demographic Information Form.** It is a form prepared by the researcher consisting of a number of questions such as age, gender, marital status, education, profession, income level of the individuals, and whether there is a person diagnosed with COVID-19 among their acquaintances.

**COVID-19 Fear Scale.** The COVID-19 Fear Scale (K19-FS) is a one-dimensional scale which was developed by Ahorsu et al (2020). The scale consists of 7 items (Some items of the scale: “I am very afraid of the coronavirus”; “Thinking about the coronavirus disturbs me”; “When I watch the news and stories about the coronavirus on social media, I feel anxious”). The scale is a 5-point Likert type scale (1 = strongly disagree, 5 = totally agree). Factor loads (.66-.74) and corrected item-total correlation (.47-.56) of the scale were found to be acceptable. The internal consistency of the scale was calculated as  $\alpha = .82$  and test-retest reliability as  $r = .72$ . K19-FS showed a positive correlation with perceived weakness, hospital anxiety, and depression (Ahorsu et al., 2020).

K19-FS has been adapted into Turkish by Satici et al (2020). Confirmatory factor analyzes of the scale showed that all fit indices were within acceptable limits [ $\chi^2$  (13, N = 1304) = 299.47, SRMR = .061, GFI = .936, NFI = .912, IFI = .915, CFI = .915]. According to the Item Response Theory, the analysis results (all  $\alpha$  values higher than 1.0) revealed that the scale has appropriate item difficulty and the ability to distinguish between performers and nonperformers. Concurrent validity was evaluated by calculating the correlations of K19-FS with depression, anxiety, stress and life satisfaction. Analyzes showed a significant positive correlation between K19-FS and depression ( $r = .38, p < .001$ ), anxiety ( $r = .55, p < .001$ ) and stress ( $r = .47, p < .001$ ); revealed a significant and negative correlation ( $r = -.20, p < .001$ ) with life satisfaction. In this study, the internal consistency coefficient of the scale is  $\alpha = .91$ .

**Three-Factor Spiritual Well-Being Scale.** The Three-Factor Spiritual Well-Being Scale (3F-SWBS) was developed by Ekşi and Kardaş (2017) for adults. The scale is a 5-point Likert type scale (1 = not suitable at all, 5 = completely appropriate) and has 29 items. The scale has a 3-factor structure: Transcendence, Harmony with Nature and Anomie. As a result of the confirmatory factor analysis, an acceptable model emerged ( $\chi^2 / df = 4.11$ , RMSEA = .06, SRMR = .50, NFI = .90, CFI = .92). The internal consistency values of the sub-dimensions of the scale are  $\alpha = .95$  for Transcendence,  $\alpha = .86$  for Harmony with Nature, and  $\alpha = .85$  for Anomie; for the total of the scale,  $\alpha = .89$ . To calculate the total scale score, items in the Anomie sub-dimension should be reverse-scored. In this study, the internal consistency coefficient calculated for the total scale is  $\alpha = .73$ ;  $\alpha = .86$  for Transcendence,  $\alpha = .66$  for Harmony with Nature, and  $\alpha = .85$  for Anomie.



## Analysis of Data

Before starting data analysis, missing and incorrectly filled forms ( $n = 10$ ) were excluded. Outliers were calculated with the Mahalanobis distance and 39 data were excluded from the analysis. The analyzes were conducted with 474 data. Univariate and multivariate normality were calculated with skewness and kurtosis coefficients; the reliability of K19-FS and 3F-SWBS was examined with the Cronbach alpha coefficient. Data was tested with descriptive statistics, Pearson Correlation Coefficient,  $t$  test for independent groups, one-way ANOVA and multiple regression analysis. When interpreting the findings obtained as a result of the analyzes,  $p < .05$  significance level was taken as a basis and the analyzes were made with the SPSS program.

## Results

### Descriptive Statistics and Correlation Analysis

The associations among the study variables were examined using the Pearson product-moment correlation coefficient. Descriptive statistics and correlation values for the variables are shown in Table 2.

Table 2.  
*Descriptive and Pearson Correlation Analyzes*

	Fear of COVID-19	SWB-Transcendence	SWB-Harmony with Nature	SWB-Anomie	Total Spiritual Well-being
Fear of COVID-19		-.10*	-.05	.32**	-.25**
SWB-Transcendence			.51**	-.25**	.79**
SWB-Harmony with Nature				-.24**	.65**
SWB-Anomie					-.76**
Mean (SD)	17.72(7.05)	69.39(5.95)	32.06(2.96)	16.49(6.55)	126.97(11.57)
Skewness	.44	-1.36	-1.03	.76	-.62
Kurtosis	-.58	1.37	.45	-.01	-.26

$N = 474$ , \*\*  $p < 0.01$ , \*  $p < 0.05$ , SWB-Transcendence: Spiritual Well-being subscale-Transcendence, SWB-Harmony with Nature: Spiritual Well-being subscale-Harmony with nature, SWB-Anomie: Spiritual Well-being subscale-Anomie.

In Table 2, the skewness values of the scores are between -1.36 and .44, and the kurtosis values are between -.58 and 1.37. Accordingly, the data showed a normal distribution (-2.00 to 2.00) (George & Mallery, 2019). According to the results of correlation analysis, negative correlation between fear of COVID-19 and spiritual well-being, and the subscale of spiritual well-being “transcendence” ( $r = -.25$ ,  $p < 0.01$ ;  $r = -.10$ ,  $p < 0.05$ ) was found; and a positive correlation between the fear of COVID-19 and the subscale of spiritual well-being “anomie” ( $r = .32$ ,  $p < 0.01$ ) was found.

### Spiritual Well-being Predicts Fear of COVID-19

Multiple regression analysis was conducted to determine whether the subscale of spiritual well-being (transcendence, harmony with nature, and anomie) predicts the fear of COVID-19. The results are presented in Table 3.

Table 3.  
*Prediction of Fear of COVID-19*

Variable	B	SE	$\beta$	t	p	Zero-order r	Partial r
Constant	12.253	4.474	-	2.239	.006	-	-
Anomie	.343	.049	.319	7.008	.000	.319	.308
Transcendence	-.059	.061	-.050	-.973	.331	-.104	-.045
Harmony with nature	.122	.122	.051	.999	.318	-.052	.046
R=.323		R <sup>2</sup> =.104					
F <sub>(3,470)</sub> =18.247		p=.000					

SE: Standard Error.

According to Table 3, the variables of anomie, transcendence and harmony with nature, which are the sub-scales of spiritual well-being, showed a significant relationship with the fear of COVID-19 ( $R = .323$ ,  $R^2 = .104$ ;  $F_{(3,470)} = 18.247$ ,  $p < .001$ ). These three variables together explain 10 % of the variance in the fear of COVID-19. According to the significance tests of the regression coefficients, anomie ( $p < .001$ ) is a significant predictor of fear of COVID-19. The results show that the anomie positively predicts the fear of COVID-19.

### Fear of COVID-19 Based on Demographic Characteristics of the Participants

The level of fear of COVID-19 was examined based on gender, age range, education, occupation, income level, marital status, and the status of an acquaintance who was diagnosed with COVID-19. For this, the mean and standard deviation of the variables were calculated; t test and one-way ANOVA analyzes were performed for independent groups. Analysis results are presented in Table 4.

According to Table 4, the mean scores of the participants of fear of COVID-19 vary significantly according to gender ( $t = 4.04$ ,  $p < .001$ ) and education ( $F = 6.53$ ,  $p < .001$ ). Accordingly, the average score of women ( $\bar{X}_{\text{female}} = 18.89$ ) is higher than the average score of men ( $\bar{X}_{\text{male}} = 16.30$ ). According to their educational status, the average score of those with postgraduate education ( $\bar{X}_{\text{postgraduate}} = 15.08$ ) is lower than the average score of undergraduate, high school and primary school graduates ( $\bar{X} = 17.64_{\text{undergraduate}}$ ,  $\bar{X}_{\text{high school}} = 18.75$ ,  $\bar{X}_{\text{primary school}} = 20.26$ ). In Table 3, it is seen that the fear of COVID-19 does not differ according to age range, profession, income level, marital status, and COVID-19 diagnosis status of the acquaintance.

Table 4.  
*Fear of COVID-19 According to the General Characteristics of the Participants*

Characteristics	Category	$\bar{X}$ (SD)	<i>t</i> / <i>F</i>
Gender	Female	18.89 (7.02)	4.04*
	Male	16.30 (6.83)	
Age range	18-25	16.34 (6.13)	2.18
	26-40	17.69 (7.22)	
	41-55	18.8 (7.3)	
	Above 55 years of age	17.0(7.05)	
Education	Primery school <sup>a</sup>	20.26 (8.06)	6.53* b < a
	High school <sup>a</sup>	18.75 (6.87)	
	Undergraduate <sup>a</sup>	17.64 (6.79)	
	Postgraduate <sup>b</sup>	15.08 (6.54)	
Profession	Officer	18.08 (7.27)	2.18
	Employee	19.62 (7.49)	
	Craft	18.0 (6.93)	
	Student	16.1 (6.14)	
	Other (unemployed and housewife)	17.03 (6.83)	
Economical situation			18.89 (6.70)
Low			17.78 (7.04)
Middle			14.65 (7.05)
High			2.73
Marital status	Married	18.13 (7.14)	1.82
	Single	16.87 (6.81)	
A relative diagnosed with COVID-19	Yes	17.77 (7.28)	.07
	No	17.71 (7.01)	

\*  $p < 0.001$ .

## Discussion

In this study, the relationship between fear of COVID-19 and spiritual well-being was investigated. At the same time, the fear of COVID-19 was examined according to the gender, age range, education, occupation, income level, marital status, and diagnosis status of the acquaintance. The findings are discussed below.

The first result of the research is that the fear of COVID-19 is negatively related with transcendence, which is one of the sub-dimensions of total spiritual well-being, and positively correlated with anomie. In other words, as the total spiritual well-being and transcendence increase, the fear of COVID-19 decreases; the higher the anomie is the higher the fear of COVID-19 gets. In addition, the high level of anomie is a predictive factor in the increase of COVID-19 fear. There is no study in the literature that can be directly compared with these findings. However, in a study examining the relationship between spiritual well-being and fear of death, a negative relationship was found between them. Accordingly, the higher the level of spiritual well-being is the lower the level of stress or anxiety about death gets (Chung et al., 2015). In another study, it was found that spiritual well-being has a positive effect on post-traumatic growth of individuals who have experienced trauma (Uğurluoğlu & Erdem, 2019).

In this research, spiritual well-being was evaluated in three dimensions. Among these dimensions, “transcendence” includes elements such as attachment to a Higher power, sheltering in His power, strength of belief to endure difficulties, contemplation and consolation; “harmony with nature” includes elements such as respect for nature and living creatures, and integration with nature; “anomie” includes elements such as existential emptiness, discontent, lack of meaning and purpose (Ekşi & Kardeş, 2017). Based on these points, it can be said that individuals who are more connected with a supreme power, in realization of its power and take shelter in it; give life a meaning and purpose, have low levels of fear of coronavirus. As a matter of a fact, it was found that the high anomie increased the level of fear of coronavirus.

When individuals’ level of spiritual well-being is high, they can react positively to stress and distress, and their level of fear may decrease. Studies in the literature show that spirituality has a significant negative relationship with anxiety (Glas & Poort, 2007; Nelson et al., 2009; Reutter & Bigatti, 2014). In this traumatic period created by COVID-19, spirituality can be a source for people to develop a new sense of meaning and purpose in their lives; they can keep their hopes alive, and try to make sense of their problems by connecting with the sacred. At the same time, individuals can protect their psychological health, and deal with stress and stressful conditions in a positive way. Shaw et al. (2005) reviewed some studies in the literature and concluded that spiritual values generally increase and deepen after trauma and are beneficial to people. They make them ready to face existential questions and contribute to post-traumatic growth.

According to another finding of the study, women had higher levels of fear of COVID-19 than men. This finding shows parallels with the results of the similar studies conducted during this period (Doshi et al., 2020; Haktanir et al., 2020). On the other hand, Ahorsu et al. (2020) did not find a difference between genders in their studies. Considering that women are affected by fear or phobia twice as often as men (American Psychiatric Association, 2013), the finding of this study is a reasonable result.

In this study, fear of COVID-19 was also examined based on education level. As a result, it was found that individuals with a postgraduate degree have lower levels of fear of COVID-19 than the others (undergraduate, high school, primary education graduates). This finding shows parallels with the findings of Doshi et al. (2020). On the other hand Haktanir et al. (2020) did not find a significant difference between individuals from different education levels in terms of the fear of COVID-19. The different results of the studies show that the relationship between education level and the fear of COVID-19 should be studied further. However, based on the results of this research, it can be said that the level of education significantly affects the individual’s understanding of pandemic, infection and prevention of the infection.

It was also found that there is no significant difference between the fear of COVID-19 and age range, profession, income level, the infection status of relatives and marital status. Analyses revealed that individuals of different age ranges, occupation, income level, marital status, and those with or without an acquaintance diagnosed with COVID-19 report similar levels of fear. Similarly, in the study of Haktanir et al. (2020) no significant difference was found by age range. Doshi et al. (2020) found that individuals between the ages of 20-40 experience more fear.

These research findings have some limitations. First, the data was collected from the sample that showed no clinical symptoms. Therefore, it is recommended that the findings are not to be generalized to clinical cases. Second, it has been difficult to reach some subgroups. Since access to older adults via online form was low, representation of this subgroup in this sample was limited. It is recommended to investigate this phenomenon with subgroups that are more represented more equally. Third, the findings are based on a data obtained from self-report scales. This situation carries the risk of bias.

COVID-19 creates many uncertainties in the lives of individuals and when these uncertain situations are perceived as threatening, they can lead to stress and fear by causing negative reactions in the person. Spiritual well-being can provide a way of dealing with stress and fear. In times of such trauma, individuals will be able to cope with fear as long as they are spiritually well and able to use their spiritual resources. From this point of view, practices for spiritual well-being (eg, mindfulness, logotherapy, etc.) during this period can help individuals to improve their ability to cope with the fear and trauma created by this pandemic, thereby reducing their fear and anxiety levels. In addition, in terms of developing evidence-based strategies, it seems important to consider the research findings in psycho-social intervention studies that women and individuals with lower education levels experience more fear of COVID-19, to prevent the negative psychological effects that may be caused by that fear.

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Research Article

# A Mixed-Method Study Exploring the Effectiveness of Acceptance and Commitment Therapy Based Group Psychoeducation Program on Psychological Flexibility

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## Abstract

This study aims to develop, implement, and test the effectiveness of an Acceptance and Commitment Therapy-based psychoeducation program for fostering psychological flexibility. The study employed a convergent mixed methods design. For the quantitative phase, the pre-test post-test control group experimental design was used, while in the qualitative phase, a thematic analysis was conducted. The study group consisted of 13 first-year students of the Department of Guidance and Counseling, and Psychology, aged between 18-22, 8 of whom are in the experiment group, and 5 in the control group. The students participated in 8 sessions of 90 minutes. Before and after the psychoeducation, the Acceptance and Action Questionnaire-II was administered to the students and they were also asked to answer the formerly specified open-ended questions in writing. Mann Whitney U and Wilcoxon Signed Ranks tests were used for statistical analysis; while thematic analysis was used for the qualitative component of the study. Quantitative findings showed that psychoeducation significantly increased psychological flexibility, but the change was not at a level to differ from the control group; while qualitative findings revealed that participants experienced changes in 10 themes after psychoeducation. These themes are Being Present, Self-Control, Value-Based Actions, Defusion and Coping with Feelings and Thoughts, Knowledge of Self and Others, Acceptance, Non-Avoidance, Conflict and Crisis Management, Authenticity, and Anxiety. The quantitative and qualitative findings are discussed in light of the relevant literature.

## Keywords:

Acceptance and Commitment Therapy, Psychological flexibility, Mindfulness, Group psychoeducation

## Kabul ve Kararlılık Terapisi Temelli Psikolojik Esneklik Grup Psikoeğitim Programının Etkililiğini Ölçmeye Yönelik Karma Bir Çalışma

## Öz

Bu çalışmada psikolojik esnekliği geliştirmek üzere Kabul ve Kararlılık Terapisi temelli bir psikoeğitim programının geliştirilmesi, uygulanması ve etkililiğinin sınanması amaçlanmıştır. Çalışmada yakınsak karma yöntem kullanılmıştır. Nicel kısımda ön test son test kontrol gruplu deneysel desen, nitel kısımda ise tematik analiz kullanılmıştır. Çalışma grubu, yaşları 18-22 arasında değişen, 8'i deney 5'i kontrol grubunda olmak üzere 13 Rehberlik ve Psikolojik Danışmanlık ve Psikoloji Bölümü birinci sınıf öğrencisinden oluşmuştur. Öğrencilerle 90 dakikalık 8 oturum gerçekleştirilmiştir. Öncesi ve sonrasında öğrencilere Kabul ve Eylem Formu II uygulanmış, ayrıca belirlenmiş açık uçlu sorulara yazılı olarak cevap vermeleri istenmiştir. Nicel veriler, Mann Whitney U ve Wilcoxon İşaretsiz Sıralar testi ile; nitel veriler ise tematik analiz yöntemiyle incelenmiştir. Nicel bulgular, psikoeğitimin psikolojik esnekliği anlamlı şekilde artırdığını fakat değişimin kontrol grubundan farklılaşacak düzeyde olmadığını göstermiştir. Nitel bulgular ise psikoeğitim sonrası 10 temada katılımcıların değişim yaşadığını ortaya koymuştur. Bu temalar Anda Kalma, Öz-Kontrol, Değer Odaklı Eylemler, Duygu ve Düşüncelerle Ayrışma ve Baş Etme, Kendini ve İnsanları Tanıma, Kabul, Kaçınmama, Çatışma ve Kriz Yönetme, Otantik Olma ve Kaygıdır. Nicel ve nitel bulgular ilgili literatür eşliğinde tartışılmıştır.

## Anahtar Kelimeler:

Kabul ve Kararlılık Terapisi, Psikolojik esneklik, Bilinçli farkındalık, Grup psikoeğitimi

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Acceptance and Commitment Therapy (ACT) was developed in 1986 by Steven Hayes (Hayes & Wilson, 1994). It falls under the umbrella of the third wave of cognitive-behavioral therapies, which emphasize cognitive context and coping strategies (Hayes & Smith, 2005). ACT is an intervention based on mindfulness that is “the awareness that arises from paying attention, on purpose, in the present moment, and non-judgmentally.” (Kabat-Zinn, 2005). ACT consists of six basic therapeutic elements aiming at gaining psychological flexibility. These elements are Being Present, Cognitive Defusion, Acceptance, Self-as-Context, Values, and Value-Based Actions. These six basic elements are like the six faces of a prism, and the prism itself is psychological flexibility. In other words, psychological flexibility is the main element ACT aims to gain (Hayes, Luoma, Bond, Masuda, & Lillis, 2006). At this point, it will be convenient to look at why psychological flexibility is significant for mental health.

Psychological flexibility is basically defined as being in harmony with one’s own values, even in the case of unwanted, difficult internal experiences. These internal experiences consist of disturbing emotions or critical thoughts about oneself (Hayes, Villatte, Levin, & Hildebrandt, 2011). On the other hand, psychological inflexibility is the narrowing of a person’s behavioral repertoire and a decrease in sensitivity to adapt to the requirements of life, due to the dominance of fusion with cognitions and avoiding internal experiences (Hayes, Strosahl, & Wilson, 1999). Briefly, in ACT, psychological flexibility is the foundation of mental health. (Kashdan & Rottenberg, 2010).

In ACT’s philosophical framework, a basic acknowledgment for mental health is that life contains inevitable suffering. Everyone is exposed to painful experiences in some way and could carry any pain from the past or possible future to the present moment via the mind that makes comparisons and judgments (Hayes, Strosahl, & Wilson, 1999). Considering that, attention is generally nonconsciousness, automatic, habitual, and reactive (Teasdale & Chaskalson, 2011), it is relevant for the normal functioning of the mind to be accompanied by memories brought from the past, feeding suffering while paying attention to the situations. The mind is compared to a sword that could harm a person if not known how to use it. For this reason, the main purpose of therapy in ACT is to ensure that people identify what they live for in life, their values that add meaning to life, accept those outside of personal control, and be determined to continue life-enriching behaviors (Harris, 2017). Trying to change, suppress, eliminate and control distressing internal events such as undesirable and unpleasant emotions, thoughts, memories, and bodily symptoms, turns the person into a rigid and inefficient problem solver that, contrary to expectations, makes the person unable to meet their primary needs in life. Instead, the aim is to give the client a new perspective by simply observing and accepting the aforementioned experiences as they are, and thus to realize that feelings are only feelings, thoughts are only thoughts, and memories are only memories (Strosahl, Robinson, & Gustavsson,

2017). In short, the aim of ACT is to accept feelings and thoughts and be in the moment, transform the relationship with the feelings and thoughts to change their functions, choose value-based actions, and take action (Harris, 2017).

ACT-based interventions show that psychological flexibility is related to psychological resilience (Kashdan & Rottenberg, 2010); and that change in psychological flexibility levels is a significant predictor of distress and recovery (Brandon, Pallotti, & Jog, 2020). It affects many markers of quality of life such as general mental health and job satisfaction, and is effective in reducing the symptoms of various psychological disorders such as depression, anxiety, somatic health problems, suicide and substance use (A-Tjak et al., 2015; Ducasse et al., 2018; Hayes, Luoma, Bond, Masuda and Lillis, 2006). It also appears to play a mediating role in other coping mechanisms such as cognitive reappraisal (Kashdan, Barrios, Forsyth, & Steger, 2006), and the effectiveness of psychological treatment (Masuda, Hayes, Fletcher, Seignourel, Bunting, Herbst, Twohig, & Lillis, 2007). On the other hand, psychological inflexibility is associated with depression and anxiety symptoms, distress, and mental health issues (Bond et al., 2011).

Especially in studies conducted with young people, ACT-based interventions were found to reduce impulsivity and increase self-control in at-risk youth (Soriano, Salas, Martinez, Ruiz, & Blarrina, 2009) and effective in health behaviors and in supporting their well-being (Dindo et al., 2018). Those interventions increased positive affect and decreased sadness in young people through the acceptance variable (Ciarrochi, Kashdan, Leeson, Heaven, & Jordan, 2011); reduced mental distress in young people with cancer and chronic pain (Patterson & McDonald 2015; Pielech, Vowles, & Wicksell, 2017); and were found to be relevant to be applied to young people with depression, post-traumatic stress disorder, chronic illness or chronic pain (Ernst & Mellon, 2016; Halliburton & Cooper, 2015).

With their cognitive development adolescents meet the subjectivity and ambiguity of meaning. This can be accompanied by either dogmatic thinking or the abandonment of the pursuit of meaning. As a result, two types of behavior emerge: determining actions based on feelings or acting completely unaware of emotions (Chandler, 1994). Besides, in this period adolescents' emotions become complex, intense, and unstable. For this period to reach adulthood healthily, young people must learn to understand and manage their emotions and cope with uncertainties (Buchanan, Eccles, & Becker, 1992; Rosenblum & Lewis, 2003). Considering these characteristics of the period and the fact that the adolescents begin to shape their lives with their own will and preferences in this period, it is of great importance to bringing in some abilities. Those abilities are distancing from feelings and thoughts, carrying the mind wandering in the past and future back to the present moment, determining the principles and values that one wants to realize in his life, and the awareness that it is normal to have difficulties and pains in life, and

acting in a value-oriented manner despite internal and external challenging experiences. The longitudinal study of Ciarrochi et al. (2011) reveals that role of awareness and acceptance in young people's positive development.

Reviewing the literature, we saw that there are many ACT-based group studies, but there are few conducted with the mixed-methods design. The number of ACT-based group studies in Turkey is limited and the number of the ones conducted with the mixed method are almost negligible. For this reason, in this study, the aim is to develop, implement, and test the effectiveness of an ACT-based group psychoeducation program to improve psychological flexibility. Accordingly, the research questions are as follows: (i) Does the developed ACT-based group psychoeducation increase psychological flexibility? (ii) What kind of changes do participants experience during and after the psychoeducation process?

## **Method**

### **Research Design**

This study was conducted using a convergent mixed methods design to develop and investigate the effectiveness of an ACT-based group psychoeducation program to improve psychological flexibility. In the convergent mixed-methods design, data are collected and combined simultaneously. The design makes it possible to obtain a holistic understanding by balancing the strengths of one data type with the weaknesses of the other (Creswell, 2002). The quantitative part of the study was carried out by the experimental model with a pre-test post-test control group. In this part, the independent variable was group psychoeducation and the dependent variable was the psychological flexibility level. In the qualitative part of the study, the thematic analysis method was used for analyzing the data.

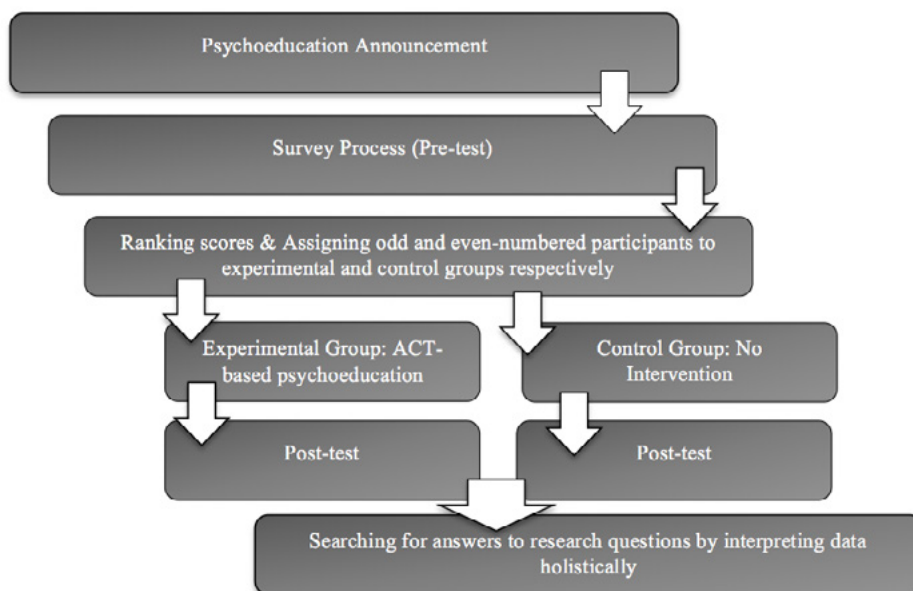
### **Study Group**

Firstly, the psycho-education announcement was made to first-year students of the Department of Guidance and Counseling, and Psychology. Afterwards, the Acceptance and Action Questionnaire II (Yavuz et. al., 2016) was administered to 21 female students who applied to the psychoeducation program to measure the psychological flexibility levels. The students were ranked according to their scores and the odd-numbered ones were assigned to the experimental group, while the even-numbered ones were assigned to the control group (waiting list group). The groups were formed as 11 students in the experimental group and 10 in the control group. Students' ages ranged from 18-22. Three students from the experimental group did not participate in the process, including the first session, so the psycho-education started and was completed with 8 members. 5 out of 10 students in the waiting list group

were included in the analysis since they were the only ones who participated in the post-test process. Psychoeducation was carried out with a 92% participation rate. The flow chart of the research process is presented in Figure 1.

**Figure 1.**

*The Flow chart of the research process*



### Data Collection Tools

The Acceptance and Action Questionnaire II and structured questions were utilized in the quantitative and qualitative parts of the study respectively. In the first session of the psychoeducation, the participants were asked to answer the following questions in writing: “Are there times and situations that you have difficulty understanding and managing yourself? If so, what are these? What are the things in yourself that you want to understand and discover?”. The questions posed in the last session are as follows: “When you take into account the points you stated in the first session, what changes and awareness did you experience during and after the psychoeducation process, if there is any?”. An option was also given to the participants to answer the questions by writing a letter to themselves.

**The Acceptance and Action Questionnaire II.** The scale was developed by Bond et al. (2011); and it was adapted to Turkish by Yavuz et al. (2016). Confirmatory factor analysis reportedly had a good fit. The Turkish form consists of 7 items and one dimension. High scores on the scale indicate low psychological flexibility. The Cronbach

alpha value was .84, and the Pearson correlation coefficient measured for test-retest reliability was .85. In the present study, the Cronbach alpha value was calculated as .82.

## **Procedure**

While preparing the content of the psycho-education program, apart from the original contents created by the authors, the works of Harris (2017), Hayes, Strosahl and Wilson (1999), Strosahl, Robinson and Gustavsson (2017), and Wolf and Serpa (2015) were used directly or by adaption. An academic expert in the field of Guidance and Psychological Counseling examined the content, and rearrangements were made according to the expert opinion. The psychoeducation program consisted of 8 sessions of 90 minutes. Sessions were held once a week in a quiet interior in the university building. The scales were administered to the participants during the survey process and in the last session. The psychoeducation has the following aims: (i) To gain participants psychological flexibility skills (ii) To motivate the participants to get to know and understand themselves and to gain self-observation skills (iii) To promote value-oriented living with acceptance and commitment skills by ensuring that participants have knowledge and awareness of being in the moment, acceptance, cognitive defusion, self-as-context, values and value-oriented actions. Mindfulness meditation exercises were done in each session. Besides, the relevant audio recordings were shared with the participants, they were encouraged to do exercises throughout the week.

As seen in Table 1, in the first session, the participants were informed about the group process, and ground rules were established. An icebreaker exercise was done to familiarize the participants with each other. The participants shared what they expect from the psycho-education and what they aim to change in their lives in writing. The concept of self-knowledge, resources in observing and understanding ourselves, filtering those resources, and using metacognition were discussed and relevant information was shared. In the second session, the aim was to gain information about the functions of the mind and awareness of the mechanisms of the mind that cause difficult experiences and emotions, and to gain knowledge and experience about the self-as-context and self-observation. The third session included the concepts of acceptance and experiential avoidance, difficult emotions, and experiencing acceptance as a method of coping with difficult emotions. In the fourth session, the aims were to gain knowledge and awareness of the concepts of cognitive fusion and defusion, to experience distancing from thoughts, and to learn how to look at thoughts in terms of their functional roles. The fifth session included knowledge and awareness of being in the moment, mind's wandering in the past and future and the autopilot state, and experiencing being in the moment. In the sixth session, the members learned the difference between values and goals; they have determined their own values and short, medium, and long term value-oriented goals, and also learned the concept of "dead person's goal" and changed

their goals to functional ones. The seventh session aimed to learn about value-based actions, to recognize the psychological barriers in front of the value-based actions, and to identify alternative feelings and thoughts to overcome these barriers. Finally, in the eighth session, a general summary of the psychoeducation was made and participants' experiences, their realizations, and the changes they experienced were shared and discussed. The goals and expectations that they had written in the first session were shared with them and they were asked to put their experiences in writing considering these notes. The summary of the psychoeducation content is presented in Table 1.

Table 1.  
*The summary of the psychoeducation content*

Sessions	Session content
Week 1	Introductions, setting group rules, self-knowledge, self-observation, metacognition concepts
Week 2	Functions of the mind, difficult internal events, self-as-context
Week 3	Acceptance, avoidance, difficult internal events
Week 4	Cognitive fusion and defusion, approaching thoughts in the context of their functional roles
Week 5	Being present, wandering mind, automatic pilot
Week 6	The difference between values and goals, determining values, dead person's goals, determining value-based goals
Week 7	Values-based actions, barriers in front of values-based actions, solutions to overcome barriers
Week 8	Summary, sharing experiences

## Data Analysis

Statistical analysis was performed using IBM SPSS 25 statistical program. Since the experimental and control groups consisted of 8 and 5 people, the data were analyzed by non-parametric methods (Tabachnick & Fidell, 2007). Comparisons between the experimental and control groups were made using the Mann-Whitney U test, and within-group differences in repeated measures were analyzed using the Wilcoxon Signed Ranks Test. In this direction, firstly, differences between the experimental and control groups' pre-test scores, afterwards, the within-group changes and finally differences between the experimental and control groups' posttest results were examined. Qualitative data gathered through writings were analyzed using thematic analysis with Nvivo 11 software. Following the procedure proposed by Creswell (2007), the texts were first divided into pieces of information. Then these pieces were coded, overlapping and unnecessary codes were eliminated, and finally, the codes were narrowed down to reach the themes for the answers to the research questions.

## Results

In this section, firstly quantitative and then the qualitative analysis results will be presented. In the quantitative part, the experimental and control groups pre-test post-test mean scores and standard deviations, and between- and within-group differences are presented. Table 2 shows the pre-test post-test mean scores and standard deviations of the experimental and control groups.

Table 2.

*The Acceptance and Action Questionnaire II pre-test and post-test scores of the experimental and control groups*

	Experimental Group N=8				Control Group N=5			
	Pre-test		Post-test		Pre-test		Post-test	
	X	Sd	X	Sd	X	Sd	X	Ss
Psychological Flexibility	3,12	1,283	2,38	1,096	3,06	,540	2,71	,756

The results obtained from the comparison of the pre-test scores of the experimental and control groups are presented in Table 3.

Table 3.

*The results of the Mann-Whitney U Test for pre-test scores of psychological flexibility levels of experimental and control groups*

	Group	N	Mean Rank	Sum of Ranks	U	Z
Psychological Flexibility	Experimental	8	6,69	53,50	17,50	-,68
	Control	5	7,50	37,50		
	Total	21				

As shown in Table 3, no significant difference was found between the two groups on psychological flexibility levels ( $U=50.00$ ,  $Z=-.145$ ,  $p>.05$ ).

Table 4 shows the results of the Wilcoxon Signed Ranks Tests performed to determine whether the psychological flexibility levels of the experimental and control groups differ between pre-test and post-test measures.

Table 4.

*The results of The Wilcoxon Signed Rank Tests for pretest-posttest scores of psychological flexibility of experimental and control groups*

		N	Mean Rank	Sum of Ranks	Z
Experimental Group	Negative Rank	5	4,00	20,00	-1,992
	Positive Rank	1	1,00	1,00	
	Ties	2			
	Total	8			
Control Group	Negative Rank	4	2,63	10,50	-,813
	Positive Rank	1	4,50	4,50	
	Ties	0			
	Total	5			

As Table 4 shows, there is a significant difference between the pre-test and post-test scores of the experimental group ( $Z = -.1992$ ,  $p <.05$ ). It is seen that the psychological flexibility level obtained from the post-test is higher than the pre-test. In other words, the psychological flexibility levels of the experimental group increased significantly after the group psychoeducation program. On the other side, there is no statistically significant difference between the pre-test and post-test scores of the control group on psychological flexibility levels ( $Z=-.813$ ,  $p>.05$ ).

The results obtained from the comparison of the post-test scores of the experimental and control groups are presented in Table 5.



Table 5.

*The results of the Mann-Whitney U Test for post-test scores of psychological flexibility levels of experimental and control groups*

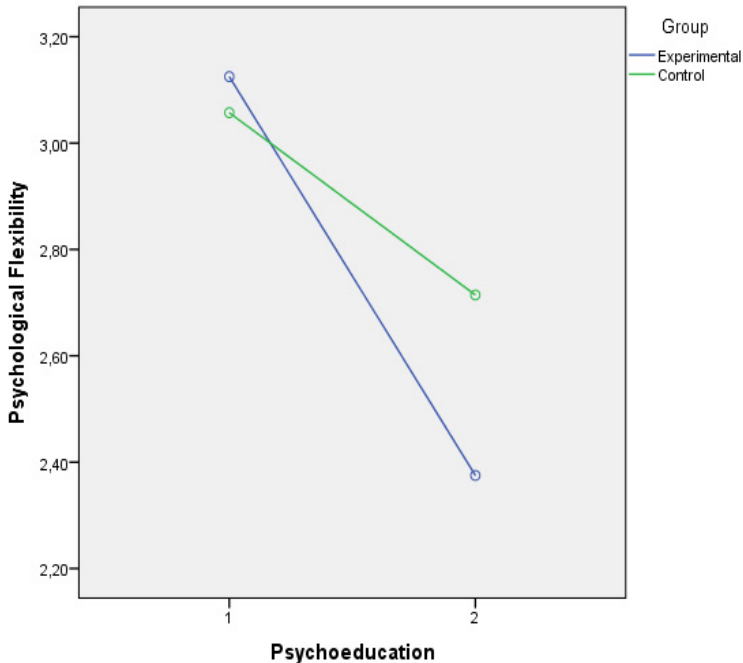
	Group	N	Mean Rank	Sum of Ranks	U	Z
Psychological Flexibility	Experimental	8	6,06	48,50	12,500	-1,107
	Control	5	8,50	42,50		
	Toplam	13				

As shown in Table 5, no significant difference was found between the two groups on psychological flexibility levels ( $U=12.50$   $Z=-1.107$ ,  $p>.05$ ).

Overall, these results indicate that while there is a significant increase in the psychological flexibility levels of the experimental group after the group psychoeducation program, this increase is not enough to differ from the control group. The psychological flexibility levels of the groups before and after the psychoeducation program are presented in Figure 2.

**Figure 2.**

*The psychological flexibility levels of the groups before and after the psychoeducation program*



After this point, the findings of the thematic analysis are presented. Before the psychoeducation, the participants were asked about the times and situations they had difficulties to understand and manage, and the things they wanted to understand better in themselves. After the psychoeducation, they were again questioned about the chang-

Table 8.  
*Themes and direct quotes from the pre-psychoeducational phase*

Themes	Direct Quotes
Self-Control	“Sometimes I wonder why I’m so impatient and aggressive.” Participant 3 “...I am an overly impulsive person.” Participant 1
	“In my communication with children, I always try to be gentle with them, to be soft even when I warn them, but I realized while covering the values topic in the psychoeducation that I cannot do it when I have a bad mood.” Participant 5
Conflict and Crisis Management	“When I am broken, it would be much better to talk calmly and civilly, and come to terms with others, and take care of my inner troubles rather than bottling them up.” Participant 3 “When I have a problem, it is not just what I feel at that moment. Whoever I have a problem with, all the former problems with him revive at that time. For this reason, while it is a small problem, it turns into a big one.” Participant 5
	“Sometimes I have to stop going against people who are going against me and restrain stubbornness a little bit.” Participant 7
	“Especially as a person who panics quickly, I would like to be cooler and more calm in any troubling event I see, hear, or experience.” Participant 7
Thoughts and Emotions	“I wish I could overcome the issues more easily; that are not so important, that I worry about from time to time.” Participant 7 “I would like to handle some of my obsessions. Sometimes I am lost in thoughts. There are times when I can never get out. When I can’t get those thoughts out of my mind, I can’t focus on what I can do.” Participant 4
	“And in the surroundings that I am entering for the first time, I cannot feel comfortable, I cannot speak. I give up some of the things because I worry about peoples’ thoughts. I can’t be myself.” Participant 2 “Because of this obsession and thoughts in my mind, I was avoiding expressing myself.” Participant 4
Anxiety	“I fear not being able to express myself.” Participant 4 “I think a lot before entering a new environment for the first time. I wonder what will happen, what we will do, whether I say something or act wrong. And in the surroundings that I am entering for the first time, I cannot feel comfortable, I cannot speak.” Participant 2 “Especially as a person who panics quickly,...” Participant 7
	“Do not give so much attention to what people say and do. Don’t stop being yourself and looking the way you are. Say what you feel. Don’t keep it to yourself. You constantly compromise yourself because others would be hurt and broken.” Participant 6 “You don’t have to be very affectionate, loved by everyone and one who always rush to help others. This is very tiring for you. (...) Know what personality you want to be, adapt to it. (...) You can be fragile and touchy; you can show it. You don’t always have to be strong. You don’t have to fulfill every behavior and personality that people expect of you. If you are unhappy be unhappy and sad” Participant 8
	“I give up some of the things because I worry about peoples’ thoughts. I can’t be myself. (...) I don’t care about myself. I always think about the good of the other person. But I don’t really think if I will be happy when I do that.” Participant 2 “In daily life, I am a very compassionate and understanding person, sometimes even foolishly, who do not exaggerate problems and who is forgiving.” Participant 1 “When I am broken, it would be much better to talk calmly and civilly, and come to terms with others, and take care of my inner troubles rather than bottling them up” Participant 3

es and awareness they experienced, if any. The data obtained were analyzed using thematic analysis. The qualitative data collected from the participants were examined under two headings: the pre-psychoeducation phase and the psychoeducation phase. Six themes were identified in the pre-psychoeducation phase. These are Self-Control,

Conflict and Crisis Management, Thoughts and Emotions, Avoidance, Anxiety and Not Being Authentic. Table 8 provides a sample of quotations illustrating the themes.

As Table 8 shows, participants stated that they had trouble with aggression, impulsiveness, and impatience under the self-control theme. In the theme of conflict and crisis management, they stated that they had problems in conflict management, that they tried to manage or fend off the conflict either by not expressing themselves or with a stubbornness that undermines healthy communication; they could not approach the conflict and crisis calmly; they carried past experiences to the current conflict; and they could not survive the effects of what happened for a long time. The theme of thoughts and emotions shows that due to the fusion with the feelings and thoughts, the participants magnify them in their minds and have difficulty in managing them, and being captured by their feelings and thoughts lowers their life efficiency. In the theme of avoidance, the participants stated that they avoid some actions and being themselves, especially due to social concerns. The anxiety theme shows that the participants experienced mostly social anxiety and also general anxiety, future anxiety, and perfectionist anxiety. In the theme of not being authentic, it is seen that while demonstrating their behaviors and reactions, instead of doing what they think and feel is right, the participants act in a way that will meet people's expectations, attract their good thoughts and not their reactions. But this situation bothers them and they become alienated from themselves.

When we examined the during-and-after-psychoeducation-phase, ten themes have been identified that includes the changes and awareness experienced by the participants. These are, Being Present, Self-Control, Value-Based Actions, Defusion and Coping with Feelings and Thoughts, Knowledge of Self and Others, Acceptance, Non-Avoidance, Conflict and Crisis Management, Authenticity, and Anxiety. Table 9 shows a sample of quotations illustrating the themes.

As seen in Table 9, the participants reported an increase in the ability to stay in the moment after psychoeducation, an awareness of the function of this skill, and its positive effect on the quality of life. In the self-control theme, the participants stated that they became more moderate and "less impulsive" compared to their previous levels and made progress, especially about anger management. In the value-based actions theme, the participants reported discovering their values and developing sensitivity to value-oriented behavior. The theme of defusion and coping with feelings and thoughts shows that the participants learned and developed to recognize, accept, and distance themselves from difficult internal experiences, that are disturbing emotions and thoughts, and to look at these feelings and thoughts in the context of their functional roles and thus to cope with them. In the theme of knowing self and others, the participants reported getting to know themselves and beginning to approach oth-

Table 9.  
*Themes and direct quotes from the post-psychoeducational phase*

Themes	Direct Quotes
Being Present	<p>“Most importantly, and what comforts me most is being able to stay in the moment, think less about the past and the future, and let it take my happy moment less abducted.” Participant 1</p> <p>“I mentioned that I had trouble focusing on my work. In fact, I realized that those thoughts in my mind were not mine, I was in control. I can stop those thoughts while doing my chores. (...) I do not allow my thoughts to affect me at that moment. Of course, I can achieve this by staying in the moment.” Participant 4</p> <p>“Earlier, I wasn’t able to stay in the moment. I wasn’t able to live my feelings. (...) But after psychoeducation, I realized that I should also experience sadness, pain, and sorrow.” Participant 2</p> <p>“I learned not to be too attached to the past and the future; I realized that staying in the moment is a more peaceful and correct action.” Participant 7</p>
Self-Control	<p>“I can be less impulsive and clap back less.” Participant 1</p> <p>“After that week of education, I started to pay more attention to this situation. In fact, she came the same week while I was trying to do my homework and wanted to play very persistently. That was when I thought about it and I softly convinced her that we should play later.” Participant 5</p>
Value-Based Actions	<p>“I learned to accept different thoughts and to be more questioning and inquisitive in line with my values.” Participant 7</p> <p>“In my communication with children, I always try to be gentle with them, to be soft even when I warn them, but I realized while covering the values topic in psychoeducation that I cannot do it when I have a bad mood. After that week of education, I started to pay more attention to this situation.” Participant 5</p>
Defusion and Coping with Feelings and Thoughts	<p>“I learned how to deal with my own thoughts and actions.” Participant 2</p> <p>“By saying ‘I am tired, tired, tired’ I can neither get better nor grow up. I will quit saying this.” Participant 8</p> <p>“After a long process, I realized that I am not at a bad level as I mentioned above. At that time, I was having problems and troubles in my inner world a little more, but I have been aware that these negative thoughts = not me. It’s just a thought and I don’t have to be that. This has been good for me. (...) I tried to embrace some of my feelings and thoughts that I was imprisoned in, and I think I accepted most of them.” Participant 3</p> <p>“I wasn’t able to live my feelings. I was thinking as if I should always be happy. But after psychoeducation, I realized that I should also experience sadness, pain, and sorrow.” Participant 2</p> <p>“You are better today than yesterday. You will get better every day. Because now you are aware that negative emotions can and will bring you somewhere. Good for you.” Participant 6</p>
Knowledge of Self and Others	<p>“I am glad I attended the psychoeducation because I started getting to know myself. I’m no longer molding myself.” Participant 2</p> <p>“...and most importantly, instead of approaching other people with “why”, you started to accept and understand them too.” Participant 6</p> <p>“I have seen that my obsessions are not actually a determining and influencing situation in my life.” Participant 4</p> <p>“After a long process, I realized that I am not at a bad level as I mentioned above.” Participant 3</p>

Table 9.  
*Themes and direct quotes from the post-psychoeducational phase*

Themes	Direct Quotes
Acceptance	“I tried to embrace some of my feelings and thoughts that I was imprisoned in, and I think I accepted most of them.” Participant 3
	“As the program ended, I had my acceptance and solutions left.” Participant 6
	“Life no longer feels cruel to you.” Participant 6
	“Everything may not go great in life, it used to frighten me a lot, but now I am not afraid of it, everything may not always go well, but I have to be content with what I have.” Participant 1
	“And now I think I accept the personalities of my father and brother.” Participant 8
Non-Avoidance	“You realize you’ve come a long way, don’t you? You accepted yourself, accepted your feelings and most importantly, instead of approaching other people with “why”, you started to accept and understand them too.” Participant 6
	“I learned to accept all my moods.” Participant 7
	“And I said ‘yes, I don’t have to be perfect. I can make mistakes in new things I do.’ I guess I can accept that now. For example, I was going to make a presentation in the lesson the other day, but it was such excitement and stress that I cannot explain ... Then I said ‘Okay, shame, don’t I do this homework here today to learn this? Isn’t this homework for this?’ the thought made me comfortable” Participant 8
Conflict and Crisis Management	“I was in a little bit of an avoidance state I do not allow my thoughts to affect me at that moment. Of course, I can achieve this by staying in the moment (...)I am no longer afraid of expressing myself. It’s like this: I used to avoid expressing myself because of my obsession and thoughts in my mind. Now I am not afraid of expressing myself even if their attitudes and thoughts would be bad.” Participant 4
	“I have not made much progress in choosing a profession. My ideas are still not clear, but at least I decided not to give up my department until I got an internship.” Participant 1
Authenticity	“You express your feelings more easily.” Participant 6
	“Thanks to the training, I got rid of the situation I mentioned above to some extent. If it hurts me when I have a problem with someone, I immediately tell the other person and I don’t let that feeling of sadness grow any longer. Because these situations may have been caused by my misunderstanding or my thinking too much, in this way I can compensate for them.” Participant 5
Anxiety	“By accepting some minor issues I realized that this is a period. I realized that any event that happened could happen to everyone at a certain time, not just to me.” Participant 7
	“If it hurts me when I have a problem with someone, I immediately tell the other person...” Participant 5
Anxiety	“...Now I am not afraid of expressing myself even if their attitudes and thoughts would be bad.” Participant 4
	“You express your feelings more easily. You don’t get too caught up in what people think of you anymore. You accept them and go on your way without compromising yourself.” Participant 6
Anxiety	“I am glad I attended the psychoeducation because I started getting to know myself. I’m no longer molding myself.” Participant 2
	“I mentioned that I had trouble focusing on my work. In fact, I realized that those thoughts in my mind were not mine, I was in control. I can stop those thoughts while doing my chores. I was in a little bit of an avoidance state I do not allow my thoughts to affect me at that moment. Of course, I can achieve this by staying in the moment.” Participant 4
Anxiety	“My ideas are still not clear, but at least I decided not to give up my department until I got an internship. Everything may not go great in life, it used to frighten me a lot, but now I am not afraid of it” Participant 1
	“And I said ‘yes, I don’t have to be perfect. I can make mistakes in new things I do.’ I guess I can accept that now. For example, I was going to make a presentation in the lesson the other day, but it was such excitement and stress that I cannot explain ... Then I said ‘Okay, shame, don’t I do this homework here today to learn this? Isn’t this homework for this?’ the thought made me comfortable” Participant 8

er people with the motivation of getting to know them instead of criticizing. They also stated that they started to have a balanced image of themselves with realizing that they used to magnify their problematic aspects in their minds. In the theme of acceptance, the participants expressed that they accept their feelings and thoughts and therefore themselves as they are. Besides, they acknowledged accepting people in their lives, inevitable difficulties in life, difficult feelings, and situations while heading towards the goals they want to achieve. The theme of non-avoidance shows that rather than avoiding expressing oneself and tending to avoid actions due to uncertainty and indecision, the participants started heading towards the actions they see right and appropriate. In the theme of conflict and crisis management, the participants stated that they started to manage conflicts and crises more healthily and easily. In the theme of authenticity, the participants reported being able to be more like themselves, reflecting this in their reactions, and acting by listening to their feelings. Finally, the theme of anxiety shows that the participants reported improvement in their complaints like social anxiety, perfectionist anxiety, and future anxiety.

### **Discussion**

This study aimed to develop, implement, and test the effectiveness of an 8-session ACT-based group psychoeducation for fostering psychological flexibility. In the quantitative phase, the pre-test post-test control group experimental design was used, while in the qualitative phase, a thematic analysis was conducted. In the first measurement made before the psychoeducation, no difference was found between the experimental and control groups. After the psychoeducation, the analyzes conducted to examine the change within the groups showed a positive significant change in the psychological flexibility levels of the experimental group and no change in the control group. Finally, the difference between groups after psychoeducation was examined and no significant difference was found. These findings showed that psychoeducation increased psychological flexibility levels in the experimental group, but the change was not at a level to differ from the control group.

In the convergent mixed model, examining the qualitative findings of the research together with the quantitative findings makes it possible to obtain a more comprehensive understanding (Creswell, 2002). Quantitative findings showed the change in the psychological flexibility levels of the participants. Qualitative findings, on the other hand, help us to understand the problems experienced by the participants before the psychoeducation and what they experienced during and after this process with the increase in their psychological flexibility levels.

Participants stated that they had problems in self-control, conflict and crisis management, thoughts and emotions, avoidance, and anxiety before the psychoeducation program and were hoping to change in these areas. When asked about the changes

and awareness they experienced during and after the psychoeducation program, 10 themes were obtained. These themes are being present, self-control, value-based actions, defusion and coping with feelings and thoughts, knowledge of self and others, acceptance, non-avoidance, conflict and crisis management, authenticity, and anxiety. Being present, value-based actions, defusion, acceptance and non-avoidance are ACT's therapeutic processes that enable psychological flexibility. In ACT-based interventions, changes are primarily experienced in these areas (Arch, et al., 2012; Arch & Craske, 2008; Hayes, Luoma, Bond, Masuda, & Lillis, 2006; Niles, et al., 2014). In addition to these, the areas in which the participants expressed experiencing change are self-control, knowing self and others, conflict and crisis management, authenticity, and anxiety.

In the theme of self-control, participants reported a decrease in the problems they experienced, especially regarding anger management, after the psychoeducation program. This finding is in parallel with studies on self-control. It has been reported that ACT-based interventions are effective in anger management (Donahue, Santanello, Marsiglio, & Van Male, 2017), result in decreased impulsivity and increased self-control in at-risk youth (Soriano, Salas, Martinez, Ruiz, & Blarrina, 2009).

Another issue the participants stated as a pre-psychoeducation problem is conflict and crisis management. In this context, they reported situations such as avoiding self-expression, bottling things up, going against others, not being able to get out of the mood caused by the troubles experienced, and not being able to act calmly. After the psychoeducation, the participants reported experiences such as expressing themselves more comfortably, not merging with feelings and thoughts, and getting out of the mood of the conflict quicker, awareness and acceptance that life contains difficulties, and coping with problems and crises more easily. Prior studies show that developing and expressing emotions flexibly instead of suppression and avoidance after stimuli that trigger emotions makes it possible to adapt better and has a negative relationship with psychopathology (Aldao, Nolen-Hoeksema, & Schweizer, 2010; Aldao, Sheppes, & Gross, 2015; Westphal, Seivert, & Bonanno, 2010). Also, it is known that acceptance-based interventions increase positive affect and reduce sadness in young people, increase the level of coping with stress factors and well-being even in serious situations such as chronic diseases (Carlson, 2012; Ciarrochi et al., 2011; Speca, Carlson, Goodey & Angen, 2000).

Another important finding is that after the psychoeducation, participants stated starting to know themselves better and also having the awareness and acceptance of their feelings and thoughts. In addition, they stated that approaching other people with acceptance triggers the motivation to understand instead of criticizing. Previous studies have noted the importance of self-acceptance. It is an important factor in mental health, and its lack may lead to emotional difficulties such as depression and

anger management problems. Besides, one of the easiest and most effective methods that make self-acceptance possible is mindfulness (Carlson & Langer, 2006; Langer, 1989). Throughout the process, the participants have developed an awareness of getting to know themselves, recognizing and accepting their feelings and thoughts, and focusing on their values, and heading towards value-based actions. This awareness is thought to enable them to act authentically and to behave and react in a way that they consider right instead of meeting expectations.

One other problem area participants complained about before the psychoeducation program included experiences such as social anxiety, general anxiety, future anxiety, and perfectionist anxiety. The findings revealed that after the psychoeducation program, they experienced a decrease in their problems in this area by operating the mechanisms of acceptance, non-avoidance, healthy conflict and crisis management, staying in the moment, self-knowledge, and being authentic. Several previous reports have also shown that ACT-based interventions are effective in dealing with anxiety (A-Tjak et al., 2015; Arch, Wolitzky-Taylor, Eifert & Craske, 2012; Khorammia et al., 2020; Swain, Hancock, Hainsworth & Bowman, 2013).

The scope of this study was limited in terms of gender. The study group did not include male students, since all who demanded participation were female students. It is also unfortunate that the study did not include a follow up measurement. During the psychoeducation, mindfulness meditations outside the sessions were encouraged but not obliged. In future studies, promoting these experiential exercises more effectively are expected to yield an increasing effect on psychological flexibility.

Taken together, these results suggest that the psychoeducation program has increased psychological flexibility levels of the participants. They stated that they experienced improvements in the basic elements of psychological flexibility such as staying in the moment, value-based actions, acceptance, non-avoidance, distancing from feelings and thoughts, and coping with them, as well as self-control, knowing oneself and others, conflict and crisis management, authenticity, and anxiety. Considering the scarcity of studies in the field that examine ACT-based interventions with a mixed method, it is hoped that this study, in which the experiences of the participants are examined in-depth, will make an important contribution to the field.



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