

Mediation Role of Experiential Avoidance in the Relationship Between Subjective Vitality and Depression

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Abstract

Depression is a mental disorder characterized primarily by depressed mood, loss of interest and pleasure. A decrease in subjective vitality is seen as one of symptoms of depression. Depressive persons tend to seal themselves off, keeping away from stressful states and taking the minimum level of action when faced with a stressful situation. Experiential avoidance behavior which individuals do to protect themselves from sad thoughts and situations causes an increase in depressive symptoms. This study aimed to investigate mediation role of experiential avoidance in the relationship between subjective vitality and depression. Data was collected as an online questionnaire in university students' online classrooms. Instruments used in research were Subjective Vitality Scale (to measure preservice teachers' subjective vitality), Acceptance and Action Questionnaire-II (to measure their experiential avoidance), and depression subscale of Depression, Anxiety, and Stress Scales (to measure their depression levels). Research group was composed of 463 participants. Negative significant relationships were observed between depression and subjective vitality, and subjective vitality and experiential avoidance. In other words, depression and experiential avoidance were reduced as subjective vitality increased. Moreover, there was a significant positive relationship between depression and experiential avoidance. It is seen that subjective vitality affects depression (direct effect) is significant and it constitutes 64.5% of total effect. In addition, subjective vitality predicts depression (indirect effect) through experiential avoidance and it constitutes 35.5% of total effect. The interaction of experiential avoidance between subjective vitality and depressive symptoms was found. Subjective vitality and experiential avoidance predicted depressive symptoms.

Keywords: Subjective vitality, experiential avoidance, depression, cognitive behavior therapy, acceptance and commitment therapy

Öz

Öznel Zindelik ve Depresyon Arasındaki İlişkide Yaşantısal Kaçınmanın Aracılık Rolü

Depresyon, depresif ruh hali, ilgi veya zevk kaybı ile karakterize ruhsal bir bozukluktur. Öznel zindelikte azalma, depresyon belirtilerinden biri olarak görülür. Depresif kişiler, stresli durumlardan uzak durarak ve stresli bir durumla karşılaştıklarında asgari düzeyde eyleme geçerek kendilerini kapatma eğilimindedir. Bireylerin kendilerini üzücü düşüncelerden ve durumlardan korumak için yaptıkları yaşantısal kaçınma davranışı, depresif belirtilerin artmasına neden olur. Bu çalışmanın amacı, öznel zindelik ve depresyon arasındaki ilişkide yaşantısal kaçınmanın aracılık rolünü araştırmaktır. Veriler, üniversite öğrencilerinin çevrimiçi sınıflarından çevrimiçi anket olarak toplandı. Araştırmada öğretmen adaylarının öznel zindeliklerini ölçmek için Öznel Zindelik Ölçeği, yaşantısal kaçınma düzeylerini ölçmek için Kabul ve Eylem Formu-II ve depresif düzeylerini ölçmek için Depresyon, Anksiyete ve Stres Ölçeğinin depresyon alt ölçeği kullanıldı. Araştırma grubu 463 katılımcıdan oluştu. Depresyon ile öznel zindelik ve öznel zindelik ile yaşantısal kaçınma arasında ters yönde anlamlı ilişkiler gözlemlendi. Diğer bir deyişle, öznel zindelik arttıkça depresyon ve yaşantısal kaçınmanın azaldığı saptandı. Dahası, depresyon ve yaşantısal kaçınma arasında anlamlı bir pozitif ilişki vardı. Öznel zindeliğin depresyonu anlamlı olarak etkilediği (doğrudan etki) ve toplam etkinin %64,5'ini oluşturduğu görüldü. Ayrıca öznel zindelik, yaşantısal kaçınma yoluyla depresyonu (dolaylı etki) yordamaktaydı ve toplam etkinin %35,5'ini oluşturdu. Yaşantısal kaçınmanın öznel zindelik ve depresif belirtiler arasında etkileşim kurduğu bulundu. Öznel zindelik ve yaşantısal kaçınma depresif semptomları öngörmektedir.

Anahtar Kelimeler: Öznel zindelik, yaşantısal kaçınma, depresyon, bilişsel davranışçı terapi, kabul ve kararlılık terapisi

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INTRODUCTION

Depression is a mental disorder characterized primarily by depressed mood, loss of interest and pleasure (World Health Organization, 2017). In depressed mood, emotions such as sadness, guilt, or irritability become dominant, affecting the person's life negatively and reducing the functionality. According to the definition of Diagnostic and Statistical Manual of Mental Disorders (DSM-5), a decrease in subjective vitality is seen as one of the symptoms of depression (American Psychiatric Association, 2013).

Subjective vitality is a valuable indicator of physical health and psychological well-being. In addition to the experiences of comfort, pleasure, and happiness, subjective vitality reflects hedonism and improved functionality (Ryan & Deci, 2001; Ryan et al., 2008). In a study conducted with university students, it was shown that subjective vitality was associated with psychological well-being, life skills and life satisfaction. (Fini et al., 2010). On the other hand, in the state of depression, subjective vitality decreases, the person may feel tired or exhausted, anhedonia and functional impairment are seen (American Psychiatric Association, 2013).

Additionally, depressed mood is strongly associated with psychological inflexibility (Kashdan et al., 2010). One of the best examples of psychological inflexibility is the experiential avoidance (Rueda & Valls, 2016). Experiential avoidance behavior, which individuals do to protect themselves from negative thoughts and situations, may cause an increase in depressive symptoms as a coping strategy (Hayes et al., 2004; Hayes, Wilson, Gifford, Follette, & Strosahl, 1996). Ottenbreit and Dobson (2004) discuss a functional analysis of depression that focuses on avoidance. According to this analysis, a person diagnosed with depression tends to isolate, keep away from stressful states, and take the minimum level of action when faced with a stressful situation. Avoidant behaviors include avoidance of solving problems, making decisions, seizing opportunities, and completing tasks. Functional perspectives on depression emphasize that immobility, avoidance, and isolation forestall the possibility of exposing oneself to achievement or reinforcement. In addition, experiential avoidance was positively related with depressive symptoms in psychiatric patients has been shown (Rueda & Valls, 2016).

Experiential avoidance can increase the perceived level of stress while avoiding negative thoughts and

situations (Bardeen, Fergus & Orcutt, 2013). The greater the avoidance, can lower vitality as it gets longer (Kashdan, Zvolensky & McLeish, 2008). As this relationship between experiential avoidance and vitality becomes chronic, it may contribute to the development of depression. In a study, it has been shown that experiential avoidance has an indirect effect on physical well-being and satisfaction through depression (Rueda & Valls, 2016).

We hypothesize that experiential avoidance mediates the relationship between the decrease in vitality, which is a symptom of depression, and the development of depression. In light of this hypothesis, this study aimed to investigate the mediation role of experiential avoidance in the relationship between subjective vitality and depression among university students.

MATERIAL AND METHODS

Participants

Ethical approval was obtained by the Social and Human Sciences Research Ethical Committee of Social Sciences University of Ankara (No: 2020/8605, Date: 18/11/2020). The research was conducted with preservice teachers attending different departments of Muğla Sıtkı Koçman University Faculty of Education in southwestern Turkey. Non-random and convenience sampling methods were utilized to select the study group.

The criteria for participation in the study included studying at the faculty of education and being a preservice teacher. The exclusion criteria of the study included studying outside the faculty of education and not being able to respond to Turkish questionnaires. Four hundred sixty-three preservice teachers who were invited to the study participated in the study.

Procedure

The data was collected as an online questionnaire in the university students' online classrooms. All students were given detailed information about the purpose of the research, personal information will be kept confidential, and researchers told the students, this is a scientific study and not commercial purposes, and they have the right not to participate in the study if they want. The study questionnaires were sent only to the participants who agreed to participate in the study. Written consent was obtained

from the volunteer participants and included in the study. The instruments used in the research were the Subjective Vitality Scale (to measure preservice teachers' subjective vitality), the Acceptance and Action Questionnaire-II (to measure their experiential avoidance), and the depression subscale of the Depression, Anxiety, and Stress Scales (to measure their depression levels).

Subjective Vitality Scale. This scale was developed by Ryan and Frederick (1997) and adapted into Turkish by Uysal, Sariçam, and Akin (2014) in a study conducted with 332 participants studying at Sakarya University in Turkey. Its seven-point Likert scale ranges from 1 (= not at all true) to 7 (= very true). Item 2 is reverse coded. Possible scores range from 7 to 49, with a higher score meaning a higher level of subjective vitality. Scale scores ranged from 7 to 49. The increase in scores obtained from the scale indicates that subjective fitness increases. There is no cut-off score for the scale. The scale has items such as "I feel alive and vital," "I have energy and spirit" and "I nearly always feel awake and alert."

The corrected item correlations vary between 0.48 and 0.74 in the scale adaptation study. As a result of the reliability analysis, the Cronbach Alpha coefficient was found to be 0.84. Examining the fit indices as a result of the confirmatory factor analysis were an acceptable level (Uysal, Sariçam & Akin, 2014).

Acceptance and Action Questionnaire-II. Developed by Bond et al. (2011) to measure experiential avoidance and psychological flexibility, this scale was adapted by Yavuz et al. (2016) into the Turkish language. The scale was valid and reliable for Turkish. Scale scores ranged from 7 to 49. The increase in scores obtained from the scale indicates that experiential avoidance increases. There is no cut-off score for the scale. The scale has items such as "My painful experiences and memories make it difficult for me to live a life that I would value" and "I am afraid of my feelings."

In the scale adaptation study, the Cronbach alpha internal consistency coefficient was found to be 0.84. Exploratory and confirmatory factor analyzes were conducted to evaluate the construct validity. The values obtained as a result of the confirmatory factor analysis were also at an acceptable level (Yavuz et al., 2016).

Lovibond Depression, Anxiety, and Stress Scale. This scale was developed by Lovibond and Lovibond (1995) and adapted into the Turkish language by Bayram and

Bilgel (2008). The four-point Likert scale is graded between 0 (= did not apply to me at all) and 3 (= applied to me very much). The scale consists of 42 items and three factors: 14 items on depression, 14 on anxiety, and 14 on stress. Possible scores range from 0 to 126. The depression sub-dimension of DASS was used in the study. 0–9 points indicate normal, 10–13 points indicate mild, 14–20 points indicate moderate, 21–27 points indicate advanced, and 28 points indicate severe depression. Higher scores indicate higher depressive symptoms. The scale has items such as "I could not seem to experience any positive feeling at all," and "I felt sad and depressed."

Validity results in terms of measuring clinical and normal samples showed that the scale could distinguish the sample. The Cronbach alpha internal consistency coefficient of the scale varies between 0.89 and item total correlations between 0.51 and 0.75. Factor load values in the three-factor scale also vary between 0.39 and 0.88 (Bayram & Bigel, 2015).

Statistical Analysis

The Pearson product-moment correlation coefficient and regression-based mediation analysis were used to identify the relationships between the subjective vitality, experiential avoidance, and depression levels of the participants. Correlation analysis conducts to determine the relationship between variables. A mediator variable is a method used to investigate the effect of one variable on another variable's size (Hayes, 2013). To identify the mediator variable between preservice teachers' experiential avoidance, subjective vitality, and depression levels, Jamovi (2019) software was used for all analyses in the study. For mediation analysis, "medmod" module which was developed for Jamovi and used "lavaan package" developed for R (2018) was used.

RESULTS

The research group was composed of 463 participants, 135 males (29.16%) and 328 females (70.84%). The ages of the participants ranged from 18 to 38, with an average of 20.8 years-old. The descriptive statistics for the subjective vitality, experiential avoidance, and depression variables are shown in Table 1. The mean depression score was 12.3. It can be concluded that the students in the study showed mild symptoms of depression.

Table 1: Descriptive statistics about depression, subjective vitality and experiential avoidance variables

	Depression	Subjective vitality	Experiential avoidance
N	463	463	463
Mean	12.3	29.9	25.0
Median	11.0	31.0	24.7
Mode ^a	14.0	31.0	20.0
Standard deviation	8.97	7.96	9.90
Minimum	0.00	7.00	7.00
Maximum	42.0	49.0	49.0
Skewness	0.886	-0.403	0.261
Std. error skewness	0.113	0.113	0.113
Kurtosis	0.531	-0.107	-0.485
Std. error kurtosis	0.226	0.226	0.226

^aMore than one mode exists, only the first is reported.

Table 2: Correlation coefficients about depression, subjective vitality and experiential avoidance variables

		Depression	Experiential avoidance	Subjective vitality
Depression	Pearson's r	-		
	p-value	-		
	95% CI Upper	-		
	95% CI Lower	-		
Experiential avoidance	Pearson's r	0.486***	-	
	p-value	< .001	-	
	95% CI Upper	0.553	-	
	95% CI Lower	0.414	-	
Subjective vitality	Pearson's r	-0.400***	-0.361***	-
	p-value	<0.001	<0.001	-
	95% CI Upper	-0.321	-0.279	-
	95% CI Lower	-0.474	-0.438	-

*** p < 0.001

The result of the correlation variables is shown in Table 2. Negative significant relationships were observed between depression and subjective vitality ($r = -0.40$) and, subjective vitality and experiential avoidance ($r = -0.36$). In other words, depression and experiential avoidance were reduced as subjective vitality increased. Moreover, there was a significant positive relationship between depression and experiential avoidance ($r = 0.49$).

According to the results of the mediation analysis, it is seen that subjective vitality affects depression (direct effect) is significant ($b = -0.29$, CI: $-0.39 | -0.18$, $p < 0.001$), and it constitutes 64.5% of the total effect. In addition, we see that subjective vitality predicts depression (indirect effect) through experiential avoidance ($b = -0.16$ CI: $-0.23 | -0.10$, $p < 0.001$) and it constitutes 35.5% of the total effect. The results of the mediator analysis are given in Table 3.

As shown in Table 4, all pathways in mediation analysis were significant. The analysis showed that subjective vitality predicted experiential avoidance significantly ($b = -0.45$, 95% CI: $-0.59 | -0.33$; $p < 0.001$). Likewise, subjective vitality predicted depression ($b = -0.29$, 95% CI: $-0.39 | -0.18$; $p < 0.001$). Finally, experiential avoidance predicted depression significantly ($b = -0.29$, 95% CI: $-0.39 | -0.18$; $p < 0.001$).

The path diagram of the analysis can be seen in Figure 1. In the figure, subjective vitality explains 19% of experiential avoidance, while subjective vitality and experiential avoidance explain 33% of depression. According to the analysis results, experiential avoidance is an essential variable between subjective vitality and depression.

Table 3: Mediation estimates of analysis

Effect	Label	Estimate	SE	95% CI		Z	p	% mediation
				Lower	Upper			
Indirect	a × b	-0.160	0.032	-0.232	-0.102	-4.89	< .001	35.5
Direct	c	-0.291	0.051	-0.387	-0.184	-5.68	< .001	64.5
Total	c + a × b	-0.451	0.049	-0.550	-0.352	-9.03	< .001	100.0

Table 4: Path estimates

			Label	Estimate	SE	95% CI		Z	p
						Lower	Upper		
Subjective vitality	→	Experiential avoidance	a	-0.449	0.063	-0.580	-0.331	-7.05	< 0.001
Experiential avoidance	→	Depression	b	0.356	0.045	0.269	0.448	7.85	< 0.001
Subjective vitality	→	Depression	c	-0.291	0.051	-0.387	-0.184	-5.68	< 0.001

CI: confidence interval. a: subjective vitality → experiential avoidance. b: experiential avoidance → depression. c: subjective vitality → depression

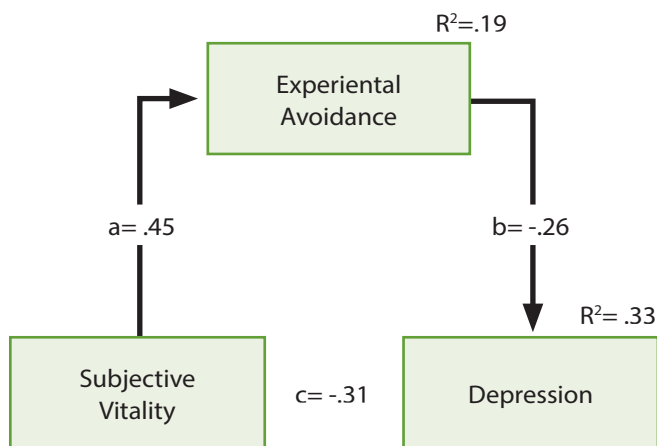


Figure 1. Path Diagram of Analysis

DISCUSSION

This study showed that significant negative relationships could be observed between depression and subjective vitality, and subjective vitality and experiential avoidance. Also, there was a significant positive relationship between depression and experiential avoidance. In other words, a correlational relationship was found between subjective vitality, experiential avoidance, and depressive symptoms. In addition to these findings, the interaction of experiential avoidance between subjective vitality and depressive symptoms was found.

Subjective vitality predicts depression indirectly through experiential avoidance. The avoidance of negative thoughts and situations may reduce subjective vitality (Kashdan, Zvolensky & McLeish, 2008). On the other hand, decreased vitality may increase avoidance. As known, reduced subjective vitality is associated with depression (Ryan et al., 2008). Increased avoidance and decreased vitality may lead to worsening depressive symptoms over time. As we expected, this study showed that experiential avoidance plays a mediation role between subjective vitality and depressive symptoms. Thus, we have reached an important finding that will contribute to explain the working principle of Acceptance and commitment therapy (ACT).

ACT is one of the third wave of cognitive behavior therapies. The primary purpose of ACT is to increase the psychological flexibility of individuals with experiential avoidance. ACT interventions change the individual's relationship with internal experiences without interfering with the content of them. Subjective vitality may be important, but rather than interventions to increase

subjective vitality, importance of interventions for the ability to act in line with one's values with low vitality. With emphasis on experiential avoidance, increasing the psychological flexibility of the therapy provides the treatment of depression (Hayes et al., 2006). In ACT, the implementation of acceptance and mindfulness-based interventions as part of the therapy process contributes to understanding the basic assumptions of the clients and encouraging behavioral changes (Hayes et al., 1999). As the avoidance ends, psychological flexibility is provided, vitality increases and depressive symptoms are reduced (Levin et al., 2014).

Individuals may avoid experiences while under stress. Although this avoidance provides relief in the short term, it increases the likelihood of avoidance when faced with a stressful situation in the long term. Thus, this avoidance becomes permanent, forms a dysfunctional behavior and vitality decreases. Wegner, Schneider, Carter, and White (1987)'s thought suppression study which is known as the experimental "white bear" study, shows the paradoxical effects of thought suppression. In the study, it was observed that when participants who were thinking of a white bear were instructed not to think anymore, thoughts about the bear came as a necessity. This study was an example for the ineffectiveness of experiential avoidance strategies to eliminate thoughts such as depressive thoughts.

It is assumed that behavioral models of depression are characterized by avoidance, withdrawal, and inactivity (Cribb, Moulds, & Carter, 2006). Ferster (1973) stated that the dominant use of avoidance behaviors might cause depressive individuals to have a narrowed behavioral repertoire. This narrow repertoire is characterized by passivity rather than initiative or action. Reluctance may cause inactivity, and inactivity may cause anhedonia. In turn, anhedonia may increase reluctance. The individual cannot develop the functional behaviors necessary to get out of this vicious circle in depression.

In treating depression, cognitive-behavioral therapy (CBT) primarily uses behavioral activation to break this vicious circle. In behavioral activation, the client begins to implement planned pleasurable activities and feels a change in negative thoughts and emotions. Motivation must be provided to combat avoided behavior. For this reason, behavioral activation is one of the essential elements of CBT in depression (Türkçapar & Sargin, 2012; Türkçapar, 2007). Understanding the mediation role of

experiential avoidance in the relationship between subjective vitality and depression may explain the concepts behind therapy approaches, such as CBT and ACT in the treatment of depression.

The limitations of the study were that the study sample was selected from a community population sample rather than a clinical sample, and therefore it could not be determined whether the participants met the diagnosis of depression. Another limitation was that sociodemographic data other than age and gender were not collected.

Consequently, the interaction of experiential avoidance between subjective vitality and depressive symptoms was found. Subjective vitality and experiential avoidance predicted depressive symptoms. Experiential avoidance, which is the dysfunctional attitude in struggling against depressive symptoms, has to be reduced in psychological intervention. It is necessary to develop functional behaviors in patients with depressive symptoms. In future studies, it is recommended to compare individuals diagnosed with depression and control groups in terms of subjective vitality and cognitive, behavioral, and emotional avoidance rather than experiential avoidance behaviors in larger and multicentered samples.

Statement of Ethics

The authors assert that all procedures contributing to this work comply with the ethical standards of the relevant national and institutional committee on human experimentation with the Helsinki Declaration of 1975, as revised in 2008. Ethical approval was received (Details are in methodology.)

Ethics Committee Approval: The study was approved by the Human Sciences Research of Social Sciences University of Ankara Ethics Committee (date and number of approval: 18.11.2020/2020/8605).

Informed Consent: Informed consent was obtained from all individual participants included in the study.

Peer-review: Externally peer-reviewed.

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