Psychometric Properties and Factor Structure of the Turkish Version of the Short Form of Behavioral Activation for Depression Scale (BADS-SF) in Non-Clinical Adults

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Abstract

Behavioral activation therapy is an evidence-based method to reduce depression in individuals with depressive symptoms. Behavioral activation therapy basically focuses more on two types of behaviour. The first one is behavioral activation, which is expressed as increased engagement in enjoyable social activities as a result of increased reinforcement resources. The second type of behavior is avoidance, which occurs when a person's sources of reward become less, leading them to avoid engaging in social activities. Individuals with depressive symptoms are less likely to engage in enjoyable activities, resulting in a decrease in activation levels and an increase in avoidance behaviors. Therefore, determining the activation levels contributes to the effective execution of a possible intervention in depression. Accordingly, Manos and colleagues (2011) developed the Behavioral Activation for Depression Scale-Short Form to measure the activation levels of individuals. This study aimed to examine the psychometric properties of the Turkish translation of the Behavioral Activation for Depression Scale-Short Form. We recruited a non-clinical sample group of 540 participants (F/M = 368/172) aged between 18 and 44 (M=22.57, SD=3.670) using the convenience sampling method. We performed exploratory and confirmatory factor analyses by forming two different sub-samples. As a result of these analyses, we found that the two-factor, eight-item structure consisting of activation and avoidance subscales showed a good fit. In addition, we found that the internal consistency coefficients for the entire scale and activation subscale were moderate and good, while they were weak for the avoidance subscale but were at an acceptable level. We examined the relationship between depression and life satisfaction for criterion validity. We observed that the Behavioral Activation for Depression Scale-Short Form has a negative correlation with depression and a positive correlation with life satisfaction and showed that the criterion validity is ensured based on the results obtained. Accordingly, we showed that the Turkish version of the Behavioral Activation for Depression Scale-Short Form has sufficient qualifications to measure the activation level in adults.

Keywords: *Adult, Behavioral activation, Depression, Depression scale*

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INTRODUCTION

Behavioral Activation (BA) was first used in cognitive therapy as a component of depression intervention. BA, which proved to be sufficient and effective on its own in reducing depressive symptoms as a result of experimental studies carried out, has begun to be developed as an independent model (Grosscup & Lewinsohn, 1980; Jacobson et al., 1996; Zeiss et al., 1979). There are four variants of BA that researchers have developed to date. Grosscup and Lewinsohn (1980) developed the first version, Beck (1979) added the second version as a component of cognitive therapy, the third version that Jacobson and colleagues (1996) tested in component analysis and finally, Lejuez and colleagues (2001) developed the fourth version of BA. Studies conducted on BA show that it is an effective alternative therapy model in depression intervention (Cuijpers et al., 2007; Ekers et al., 2008; Pott et al., 2022; Stein et al., 2021) and is currently accepted as an independent evidence-based therapy model (Lejuez et al., 2001; Martell et al., 2001; Pass et al., 2018).

In BA theory, a person's association with positive reinforcement sources and their participation in social activities are conceptualized as activation, while a person's withdrawal from the social activity is conceptualized as avoidance (Barlow et al., 1984; Carvalho et al., 2011; Mazzucchelli et al., 2009; Sturmey, 2009). BA basically emphasizes that depressive individuals stay away from various pleasurable activities, thus decreasing their activation levels and increasing their avoidance behaviour (Ferster, 1973). Individuals who decrease their participation in pleasurable activities also stay away from positive reinforcement sources (Carvalho et al., 2011). People who keep away from these sources lose the ability to receive rewards from their environment, resulting in symptoms and behaviours classified as depression (Kanter et al., 2006; Martell et al., 2010). To reduce depression, BA contributes to the individual's gaining new skills and creating a meaningful life by increasing the sources of stable positive reinforcement (Manos et al., 2010). BA is defined as a short structured psychotherapeutic approach and intervenes in line with three purposes; (a) increasing participation in pleasurable activities, which increases the activation level (b) decreasing participation in activities that cause depression, in other words, reducing avoidance behaviour, and (c) solving problems preventing access to rewards (Dimidjian et al., 2011). Although their treatments differ, all BA methods focus on activation and avoidance behaviours through various techniques (Manos et al., 2010). Therefore, determining activation and avoidance levels in BA are the key points for a successful treatment (Shudo et al., 2016).

The presence of many features of BA also revealed the need to measure these with various measurement tools (Wagener et al., 2015). For example, Pleasent Events Schedule; PES (MacPhillamy & Lewinsohn, 1982), Unpleasasant Events Schedule; UES, (Lewinsohn & Talkington, 1979), The Environmental Reward Observation Scale; EROS (Armento & Hopko, 2007) and Reward Probability Index; RPI (Carvalho et al., 2011) have been developed to determine the structures and properties of BA models. However, these tools seem to fail to evaluate the factors addressed in newer versions of the BA, such as avoidance and rumination (Teismann et al., 2016; Wagener et al., 2015). Manos and colleagues (2011) aimed to address these deficiencies and developed the BADS-SF to measure the changes in behaviours in BA therapy.

While developing the BADS-SF, 12 of the 25 items in the long form of the BADS were selected for the short form at the first stage. These items are divided into two subscales: activation and avoidance. Factor analysis of the BADS was performed with three different samples (N=413), and items with pattern matrix loading of ≥.50 and secondary loadings of ≤.40 were selected on any other factors. As a result of EFA and CFA, the BADS-SF with nine items and two subscales (activation and avoidance) with a good internal consistency coefficient (α=.81) was developed. Depressive symptoms are negatively correlated with activation, which is one of two subscales of the BADS-SF. In other words, activation is considered a factor that prevents the worsening of depression. On the other hand, depression and avoidance are positively correlated meaning that avoidance is a factor that contributes to the increase in depression (Radloff, 1977; Shudo et al., 2016).

Scale adaptation studies not only save time that is going to be spent developing a new scale, but they also help to generalize the data obtained and reveal the similarities and differences between societies (Çapık et al., 2018). Therefore, it is important to adapt and replicate studies on BA in different

cultures (Kanter et al., 2006). In this sense, the BADS-SF has been successfully adapted to German (Fuhr et al., 2016), Japanese (Shudo et al., 2016), French (Wagener et al., 2015) and Brazilian-Peruvian (Aschar et al., 2021) languages. We expect that the Turkish adaptation of this scale will contribute to cross-cultural studies and be used in depression interventions and BA therapy practices. Although there is a study (Koşan & Seçer, 2022) showing that BA therapy is an effective model in Turkey, the activation levels of the participants were not measured in this study, and the researcher expressed this as a limitation. For this reason, researchers recommended that the activation and avoidance levels of depressive individuals should be measured in future studies. Therefore, by adapting the scale, we aim to contribute to extending previous cross-cultural efforts.

To summarise, a decrease in the individual's behavioral activation level and an increase in avoidance behaviour are closely associated with depressive symptoms. In this sense, measuring the activation and avoidance levels of individuals in the last week will provide important information to practitioners and allow the intervention to be carried out effectively. For this reason, we decided to adapt the BADS-SF to Turkish and aimed to evaluate its psychometric properties.

METHOD

Participants and Procedure

We had to create an online form for the data collection as this process coincided with the pandemic. To reach the participants, we contacted lecturers at various universities and asked them to share the study forms in their online classes. We, therefore, used the convenient sampling method in this study. We asked the participants to fill out an informed consent form, a demographic information form, Beck Depression Inventory (BDI) and the Satisfaction with Life Scale (SWL). A total of 540 undergraduate students (368 Female; 172 Male) aged between 18 and 44 (M=22.57 SD=3.670) filled out the online forms. We asked the participants if they had any psychiatric diagnoses to set up an exclusion criterion. Accordingly, we excluded those with clinical diagnoses from the data set (Data of four participants). Therefore, the sample group represents a non-clinical sample group.

Translation Process

We first obtained permission from the authors of the original scale to adapt it into Turkish. Then, the original scale was translated from English to Turkish by two independent experts who are fluent in both languages. These translations were examined by three academics who are experts in Counselling and Psychology. They, thus, edited and corrected inadequate expressions and concepts in the translation. Based on the feedback received from the experts, it was determined that the Content Validity Index (CVI) of the scale was .87, which shows that the CVI of this scale is provided (Shi et al., 2012). Afterwards, the scale was translated back into English by two independent academics who are experts in English. They stated no significant difference between the translations of the scale from Turkish to English and vice versa. After this stage, two lecturers who are experts in the field of Turkish language evaluated the suitability of the scale for Turkish in terms of language and expression. We applied the finalised scale to 30 undergraduate students studying at the English Language and Literature Department to ensure the scale's linguistic validity one week apart. We found the correlation between the Turkish and English forms of the scale as r=.82. To summarise, based on the above-mentioned steps, such as the translation process, the feedback from the experts (Geisinger, 1994), and the correlation between the original scale and its Turkish form obtained with the test-retest method (Vilagut, 2014), it can be stated that the adapted measurement tool meets the linguistic validity conditions.

Instruments

1- Behavioral Activation for Depression Scale-Short Form (BADS-SF)

The BADS-SF (Manos et al., 2011) is a short form of the BADS developed by Kanter and colleagues (2006) to determine changes in activation and avoidance behaviours based on BA theory. The BADS-SF is a 7-point Likert scale scored between 0 and 6. The original scale has two subscales as activation (items 2,3,4,5 and 9) and avoidance (items 1,6,7 and 8). Researchers recommended calculating the items in the avoidance subscale (1,6,7 and 8) by reversing them to obtain a total score from the original scale. A high total score indicates a high level of activity and a low level of avoidance behaviour. The total scores

obtained from the activation and avoidance subscales are accepted as indicators of high activity and high avoidance behaviours, respectively. While the Cronbach's alpha value of the original scale was determined as α = .81, it was .70 for our study (Activation subscale α = .85 and Avoidance subscale α = .55).

2- Satisfaction with Life Scale (SWL)

The SWL, which was developed by Diener and colleagues (1985), is a 5-point Likert-type scale rated between 0 (strongly disagree) and 4 (completely agree). The Turkish adaptation of the SWL was carried out by Dağlı and Baysal (2016). Its fit indices in the Turkish version are as follows: RMSEA 0.030, NFI=0.99 NNFI=1 CFI=1 GFI=1 AGFI= 0.97 SRMR=0.019. The total variance rate explained by the scale was determined as 68.38%. The internal consistency of the scale was calculated as Cronbach's α = .88, and the correlation coefficient measured by the test-retest method was calculated as r = .97. High scores on the scale indicate high life satisfaction, and low scores indicate low life satisfaction. In the current study, we found the internal consistency as Cronbach's α = .81.

3- Beck Depression Inventory (BDI)

Beck and colleagues (1961) developed the BDI to determine depression levels in adolescents and adults. It consists of 21 items measuring the depression symptoms of individuals in the last week. The Turkish adaptation of the BDI was made by different researchers at two different times (Hisli, 1989). While high scores obtained from the scale indicate high depression levels, low scores indicate low depression levels. According to the scores obtained from the scale: A score of 0-9 is classified as minimal depression, 10-16 is mild depression, 17-29 is moderate depression, and 30-63 is severe depression. In the current study, we found the internal consistency as Cronbach's α = .88.

Statistical Analysis

We performed the analyses using Spss 21 and Amos 22 programs. Since factor loadings of the scale differed in previous studies (Aschar et al., 2021; Fuhr et al., 2016; Wagener et al., 2015; Yamamoto et al., 2015), we decided to perform both EFA and CFA. Therefore, we randomly divided the sample group into two subsamples for EFA and CFA using the SPSS statistical package program. The EFA sample group consisted of 260 (180 Female; 78 Male) participants aged between 18 and 40 (M=22.74 SD=4.028). The CFA sample group consisted of 282 (188 Females; 94 Males) participants aged between 18 and 44 (M=22.36 SD=3.278). We checked the accuracy of the data before performing the statistical analysis. Since the data we collected through an online form did not allow the participants to move on to another question without answering the previous one, no deficiencies were identified in the data set. We took the kurtosis and skewness values between ± 1.5 as normality criteria (Tabachnick & Fidell, 2007). We then calculated the Mahalanobis distance for the multivariate normality assumptions and determined the extreme values with chi-square and degrees of freedom. Before performing the factor analyses, we used the Kaiser-Meyer-Olkin (KMO) value above 0.70 and Bartlett Sphericity Test value of $p<0.01$ as criteria for the suitability of the data for factor analyses. We accepted that the eigenvalues of the factors should be above 1, the factor loading of each item should be at least .32, the difference between the factor loading of the items loaded on both factors should be at least .10, and the total variance should be at least 52% as criteria for the EFA (Henson & Roberts, 2006). We then applied CFA to determine the suitability of the structure obtained in EFA and evaluated the model-data fit. In this direction, we have taken the following values as the basic criteria of model fit indices: $\chi 2$ /df ratio ≤3.00; RMSEA ≤0.08; 0.90≤ NFI, NNFI, IFI, GFI, AGFI; CFI≥0.95; GFI, AGFI ≥ 0.85; RMR≤0.08; PNFI, PGFI ≥ 0.95 (Kline, 2011; Schumacker & Lomax, 2004).

RESULTS

In the first stage of the study, we found no significant difference between the two sample groups in terms of variables (BADS-SF t530=,358, p=.49; BDI t530= -,348, p=.069; SWL t530= 1,061 p=.64) as a result of t-tests. The findings regarding the EFA and CFA samples are as follows:

1- Exploratory Factor Analysis

In scale adaptation studies, using the CFA only can turn this process into an exploratory model, and results can be misinterpreted. Therefore, using the EFA at the first stage and then applying the CFA gives stronger results for a better adaptation of the scale (Orçan, 2018; Schmitt, 2011). For example, when performing the EFA first, structures not apparent in the CFA become clearer (Thompson, 2004). Also, more than one model can fit in a dataset where only the CFA is applied. Therefore, this situation might create confusion as to which model shows a more suitable structure (Orçan, 2018). In this sense, we first conducted the EFA on the 9-item form of the BADS-SF. Before the EFA, we performed an outlier analysis and excluded the data of two participants from the data set as they were outliers. We included 256 (179 Females; 77 Males) participants aged between 18 and 40 (M=22.74 SD=4.028) in the analysis. We decided that the KMO (0.89) and Bartlett Test of Sphericity $\chi 2$ =689.718, p= 0.000) were suitable for the EFA (Bartlett, 1954; Kaiser & Rice, 1974). Then, we examined the skewness (between -.624 and .084) and kurtosis values (between -.298 and -1.067) of each item and found that the data did not show a large deviation from the normal distribution (Tabachnick & Fidell, 2007). Since the factors are assumed to be unrelated, the varimax rotation technique was applied. As a result of the first EFA, we obtained a two-factor structure with an eigenvalue higher than 1, explaining 56.40% of the total variance and the factor loadings varying between .549 and .839. The total Cronbach's alpha was .72 for the first EFA. We found that the 8th item (I did engage in activities that would distract me from feeling bad) in the scale had a factor loading over .30 in both factors. Researchers state that such items have a complex structure and, therefore, the scale structure should be re-examined by either item removal or various rotation techniques (Erkuş, 2007). Similarly, item 8 was removed from the analyses for similar reasons in the French, German, and Japanese versions of the scale (Fuhr et al., 2016; Wagener et al., 2015; Yamamoto et al., 2015). After consulting the opinions of academics who are experts in scale development, we decided to remove item 8. Then, we performed EFA for the second time (see table 1) with the remaining eight-item scale (KMO= .82; Bartlett Test of Sphericity $\chi 2$ =607.894, p= 0.000).

Table 1. *Factor loadings of the Turkish BADS-SF (8 items)**

	***N*=256**				
	Factor 1 Activation	**Factor 2 Avoidance**	**Common factor Variance (h^2)**	**Skewness**	**Kurtosis**
4. Ne tür etkinliklere katılacağım ve/ya hangi durumlar içinde olacağım (yaşayacağım) konusunda iyi kararlar verdim. *I made good decisions about what type of activities and/or situations I put myself in.*	**.842**		.712	.012	-.726
3. Farklı birçok etkinlikte bulundum. *I engaged in many different activities.*	**.817**		.668	.112	-.818
5. Aktif biriydim ve belirlediğim hedeflere ulaştım. *I was an active person and accomplished the goals I set out to do.*	**.805**		.651	-.145	-.526
9. Keyifli şeyler yaptım. *I did things that were enjoyable.*	**.799**		.641	-.347	-.637
2. Yaptığım işlerin yoğunluğu ve çeşitliliğinden hoşnutum *I am content with the amount and types of things I did.*	**.738**		.565	.017	-.709
6. Yaptıklarımın çoğu hoş olmayan bir şeylerden kaçmak veya kurtulmak içindi** *Most of what I did was to escape from or avoid something unpleasant.***		**.744**	.574	.389	-1.066
1. Yapmam gerektiği halde yapmadığım bazı şeyler oldu.** *There were certain things I needed to do that I didn't do.***		**.701**	.492	-.606	-.523
7. Sorunlarım hakkında tekrar tekrar düşünmeye çok zaman harcadım. ** *I spent a long time thinking over and over about my problems.***		**.657**	.431	-.732	-.366
Explained variance	%40.72	%18.45			
Total variance explained	%59.17				

* Items with a factor loading above .32 are included. Items 1, 6 and 7 were reverse scored.
**Reverse scored.

As a result of the second EFA, we obtained a two-factor structure with an eigenvalue higher than one (eigenvalue factor 1=3.26, eigenvalue factor 2=1.48), explaining 59.17% of the total variance and factor loadings varying between .657 and .842. The variances explained by the first and second factors are 40.72% and 18.45%, respectively. While items 2-5 and 9 were placed in the activation subscale, items 1, 6 and 7 were placed in the avoidance subscale. Furthermore, five items had factor loadings between .738 and .842 in the activation subscale, and three items were between .657 and .744 in the avoidance subscale. Finally, Cronbach's alpha for the entire scale, the activation subscale and the avoidance subscale were α = .72, .86 and .57, respectively.

2- Confirmatory Factor Analysis (CFA)

We applied CFA to determine the model fit of the two-factor structure of the BADS-SF. Before the CFA, we performed an outlier analysis and excluded the data of seven participants from the data set as they were outliers. We included 275 (184 Females; 91 Males) participants aged between 18 and 44 (M=22.36 SD=3.278) in the analysis. We found that the skewness (between -0.04 and 0.45) and the kurtosis (between -0.47 and -0.91) values of the eight items for the second sample group did not show a large deviation from the normal distribution (see Table 2).

Table 2. *Model fit indices*

Model	n	χ2	*df*	χ2 /df	RMSEA	SRMR	CFI	NFI	RFI	AGFI	GFI
Two factors: "Activation" and "Avoidance"	275	29.94	19	1.576	0.046	0.039	0.98	0.95	0.93	0.95	0.97

The factor structure of the scale, the insignificant χ2 value (p = .052, > .05), and the RMSEA value less than 0.05 (RMSEA= 0.046) indicate that the BADS-SF has the goodness of fit indices suggested (Bentler, 1990; Schermelleh-Engel et al., 2003; Schumacker & Lomax, 2004; Tabachnick & Fidell, 2007). As a result of CFA, the correlation coefficient between activation and avoidance dimensions was determined as -.175. In addition, standardized loadings, t-values, and correlations of each observed variable with the variable group are given in Table 3.

Table 3. *Correlation analysis results between factors*

Factor/Item	Standardized load values	*t*	R^2
Activation			
Item 2	0.62	1	0.38
Item 3	0.64	8.50	0.41
Item 4	0.73	9.34	0.53
Item 5	0.78	9.74	0.61
Item 9	0.69	9.14	0.48
Avoidance			
Item 1	0.37	1	0.14
Item 6	0.58	3.59	0.34
Item 7	0.58	3.62	0.34

The relationship of each observed variable with the related factor is shown with standardized loadings. In Table 3, it was determined that the standardized factor loadings of the model were sufficient, and the t values were significant (p< 0.001).

3- Descriptive Statistics, Internal Consistency Reliability and Construct Validity

We calculated descriptive statistics over the entire sample group (N=532) and determined that the skewness and kurtosis values for normality were within the desired range (see Table 4). We then examined the Mahalanobis distance to detect the extreme values and excluded the data of eight participants. We performed the analyses on the data of 532 (364 Female; 168 Male) participants aged between 18 and 44 (M=22.56 SD=3.670). We have given the mean, standard deviation, and internal consistency (Cronbach's α) coefficients of the scales we used in the research in Table 4.

Table 4. *Descriptive statistics*

		Total *N*=532				
		M	***SD***	**Skewness**	**Kurtosis**	**Cronbach's α**
BADS-SF	Total	24.46	6.32	-.079	-.087	0.70
	Activation	18.01	18.01	-.032	-.552	0.83
	Avoidance	11.54	11.54	-.110	-.381	0.55
BDI		15.22	9.72	.727	.090	0.88
SWL		13,94	4.03	.042	-.394	0.81

When looking at the table, we can express the sample represents a group with mild depressive symptoms. Cronbach's alpha for the entire scale, the activation subscale, and the avoidance subscale, were α = .70, .83 and .55, respectively. While Cronbach's α values for the entire scale and the activation subscale are at an acceptable level, it is weak but acceptable (Jain & Angural, 2017) for the avoidance subscale. We calculated the Pearson's correlations between the BDS-SF total score and its subscales with other scales (BDI and SWL) for the whole sample group (N=532). The results obtained are shown in Table 5.

Table 5. *The Pearson correlation table of the BADS-SF with other tools*

Measurement tools	**Total-*N*=532**				
	1	2	3	4	5
1-BADS-SF	1				
2-BADS-SF / Activation	0.87**	1			
3-BADS-SF / Avoidance	-0.55**	-0.06	1		
4-BDI	-0.41**	-0.34**	0.26**	1	
5-SWL	0.57**	0.55**	-0.22**	-0.44**	1

As expected, we found that the BADS-SF total and activation subscale were significantly negatively correlated with depressive symptoms (BDI; r = -.41 and -.34) and positively correlated with life satisfaction (SWL; r = .57 and .55). Also, we found that the avoidance subscale had a significant positive correlation with depressive symptoms (BDI; r = .26) and a significant negative correlation with life satisfaction (SWL; r = -.22).

DISCUSSION, CONCLUSION AND SUGGESTIONS

This study examined the psychometric properties of the Turkish version of the short form BADS developed by Manos et al. (2011) on a non-clinical sample. BA therapy has grown in popularity in recent years. This therapy model, which has been proven to be effective time and time again, requires measurement of the fundamental elements. The study's starting point is the scarcity of research on the use of BA therapy in Turkey (Koşan & Seçer, 2022) as well as the absence of a valid and reliable tool for measuring behavioral activation, which is one of the core elements of BA therapy, in these studies. In this sense, we first provided the BADS-SF language validity based on expert opinions and analyses in the pilot stage. The Pearson Correlation analysis's results revealed that the English and Turkish versions of the BADS-SF showed a good match. Similarly, numerous studies in various languages have demonstrated the language validity of the BADS (Aschar et al., 2021; Fuhr et al., 2016; Wagener et al., 2015; Yamamoto et al., 2015). In line with this result, we can say that the Turkish version of the BADS-SF is similar to its English version.

Considering previous versions had found different items-factor loadings (Teismann et al., 2016; Wagener et al., 2015), we first conducted an EFA. Unlike the original scale, after EFA, we found that item 8 had over .32 item-factor loading in both factors and therefore removed this item from the scale. Similarly, the researchers removed item 8 from the scale for similar reasons in the Brazilian and Peruvian versions (Aschar et al., 2021). Erkuş (2007) suggests that items with a factor loading between .30 and .35 are complex items and should be removed from the scale. Similarly, researchers stated that French, German, and Japanese versions of the scale produced more valid results without the 8th item (Fuhr et al., 2016; Wagener et al., 2015; Yamamoto et al., 2015). Furthermore, the first item was included in different factors in different sample groups. For example, it appeared in the activation subscale for the Community Sample but not in the avoidance subscale for the Undergraduate and Graduate samples (Wagener et al., 2015). Similar to our study, item 1 was included in the avoidance subscale in the German, French, Japanese and Brazilian-Peruvian versions (Aschar et al., 2021; Fuhr et al., 2016; Wagener et al., 2015; Yamamoto et al., 2015).

In the second EFA, the scale items were categorised into two dimensions, activation and avoidance, as in the original. We applied CFA for the eight-item and two-factor structure determined in the second EFA, and in line with the results we obtained, we revealed that the scale had a good model fit. The results we obtained here also show that the Turkish version of the BADS-SF has better fit indices than previous studies (Aschar et al., 2021; Fuhr et al., 2016; Wagener et al., 2015; Yamamoto et al., 2015). Accordingly, we can say that the validity of the eight-item form of the BADS-SF consisting of avoidance and activation subscales has been ensured.

In the study, we also calculated internal consistency coefficients for the BADS-SF and both subscales and found that avoidance is the subscale with the lowest internal consistency. Previous studies have also reported low internal consistency coefficients for the avoidance subscale (Aschar et al., 2021; Fuhr et al., 2016; Wagener et al., 2015; Yamamoto et al., 2015). Therefore, Manos and colleagues (2011) stated that subscales should not be calculated separately and that a total score should be obtained for the whole scale (Fuhr et al., 2016; Wagener et al., 2015). Just because a scale or test has high alpha values does not always mean they are of higher quality (Panayides, 2013). Rather than cultural and language difficulties, the low alpha value obtained in the avoidance subscale can be explained by the low number of items (Fuhr et al., 2016; Panayides, 2013). For example, studies clearly demonstrate that the avoidance subscale with more items from the BADS long version has a sufficiently high alpha level (Kanter et al., 2006; Krings et al., 2021; Mohammadi & Amiri, 2010; Teismann et al., 2016). On the other hand, despite its low internal consistency, the avoidance subscale of the BADS-SF is within an acceptable range (Jain & Angural, 2017). This structure we obtain also overlaps with the German version of the BADS-SF. Therefore, we recommend researchers consider this when calculating the total scores for the entire scale and its subscales, as recommended by the authors of the original scale.

Similar to previous studies, we found negative correlations between depression and the BADS-SF total and activation scores, while the avoidance subscale showed a positive correlation with depressive symptoms (Coto-Lesmes et al., 2020; Stein et al., 2021; Takagaki et al., 2021; Weidberg et al., 2021). Pleasurable activities reduce depression by contributing to positive moods. Therefore, increasing activation is a factor that may alleviate depression (Dimidjian et al., 2011; Martell et al., 2001). Furthermore, avoidance behaviour is seen as a significant contributor to increasing depression (Radloff, 1977; Shudo et al., 2016). It is a type of behaviour in which people withdraw from social activities to avoid positive reinforcement. Individuals whose social relations are weakened show more depressive symptoms (Barlow et al., 1984; Carvalho et al., 2011; Mazzucchelli et al., 2009; Sturmey, 2009). This is also consistent with research indicating that avoidance is a sign of depression (Cuijpers et al., 2007; Dimidjian et al., 2011; Lejuez et al., 2001; Manos et al., 2010). Furthermore, it was shown that the activation and avoidance subscales had a very weak association. Studies arguing that both factors are distinct structures support this conclusion. Avoidance behaviour is a predictor of activation, whereas activation behaviour does not predict avoidance (Shudo et al., 2016). Martell and colleagues (2001) emphasizes that interventions for avoidance behaviour should also be made in BA therapy. As a result, interventions for activation and avoidance can be effective in reducing depressive symptoms.

Finally, we found that the BADS-SF total and activation subscale were positively correlated with life satisfaction and that the avoidance subscale had a significant negative correlation with life satisfaction. Pleasurable activities increase individuals' activation levels and contribute to their life satisfaction (Lau et al., 2020). Activation level refers to various activities that aim to increase individual involvement in the activities that they enjoy. For this reason, we think that participation in enjoyable activities will increase life satisfaction.

The Turkish version of the BADS-SF seems to have good psychometric properties for measuring behavioral activation in adults. While items 2-5 and 9 represent the activation subscale, items 1,6 and 7 represent the avoidance. As a total score can be obtained from the BADS-SF, the total scores for both subscales can also be calculated separately. While calculating the subscales, the scores should be computed without reversing. On the other hand, the items on the avoidance subscale (1,6 and 7) should be reversed when calculating the overall score. We performed this study on a sample with mild non-clinical depression, which might be interpreted as a limitation. The original study also included a clinical sample group. Therefore, we recommend repeating the study on a clinical sample group in future studies.

Davranışsal Aktivasyon Depresyon Ölçeği-Kısa Formu'nun (DADÖ-KF) Türkçe Uyarlamasının Klinik Olmayan Yetişkin Örnekleminde Psikometrik Özellikleri

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Özet

Davranışsal aktivasyon terapisi depresif belirtiler gösteren bireylerde depresyonu azaltmak amacıyla kullanılan kanıta dayalı bir terapi yöntemidir. Davranışsal aktivasyon terapisi temelde iki davranışa daha çok odaklanmaktadır. Birincisi bireyin pekiştirme kaynaklarının artması sonucu sosyal çevresinde keyif alıcı etkinliklere daha çok katılması olarak ifade edilen davranışsal aktivasyondur. İkincisi ise bireyin pekiştirme kaynaklarının azalması anlamına gelen ve sosyal faaliyetlerden uzaklaşmasına neden olan kaçınma davranışıdır. Depresif belirtiler gösteren bireylerde keyif verici aktivitelere katılmada bir isteksizlik yani aktivasyon düzeylerinde bir azalma görülürken kaçınma davranışlarında ise bir artış meydana gelir. Bu nedenle depresyon müdahalelerinde aktivasyon düzeylerinin belirlenmesi önemli veriler sağlayarak müdahalenin etkili bir şekilde yürütülmesine katkıda bulunur. Bu doğrultuda Manos vd., (2011) bireylerin aktivasyon seviyelerinin ölçülmesine yönelik Davranışsal Aktivasyon Depresyon Ölçeği-Kısa Formu'nu geliştirmişlerdir. Bu çalışmanın amacı Davranışsal Aktivasyon Depresyon Ölçeği-Kısa Formu'nun Türkçe çevirisinin psikometrik özelliklerini incelemektir. Kolay örnekleme yöntemiyle yaşları 18-44 (M=22.57 SD=3.670) arasında değişen 540 (368 Kadın; 172 Erkek) katılımcıdan oluşan klinik olmayan bir örneklem grubu oluşturduk. İki farklı alt örneklem grubu oluşturarak açımlayıcı ve doğrulayıcı faktör analizlerini gerçekleştirdik. Analizler sonucunda aktivasyon ve kaçınma alt boyutlarından oluşan iki faktörlü sekiz maddeli yapının iyi uyum gösterdiğini bulduk. Ayrıca iç tutarlılık katsayıları tüm ölçek ve aktivasyon alt boyutunda orta ve iyi düzeydeyken kaçınma alt boyutu için zayıf olsa da kabul edilebilir düzeyde olduğunu tespit ettik. Ölçüt geçerliği için depresyon ve yaşam doyumu arasındaki ilişkiyi inceledik. Elde edilen korelasyonlar sonucunda; Davranışsal Aktivasyon Depresyon Ölçeği-Kısa Formu depresyonla negatif, yaşam doyumu ile pozitif anlamlı bir ilişkisinin olduğunu ve elde edilen sonuçlar doğrultusunda ölçüt geçerliğinin sağlandığı gördük. Bu doğrultuda Davranışsal Aktivasyon Depresyon Ölçeği-Kısa Formu'nun Türkçe versiyonunun yetişkinlerde aktivasyon düzeyini ölçmek için yeterli nitelikleri sahip olduğunu gösterdik.

Anahtar Kelimeler: *Yetişkin, Davranışsal aktivasyon, Depresyon, Depresyon ölçeği*

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Genişletilmiş Özet

Problem: Davranışsal Aktivasyon (DA) ilk olarak bilişsel terapide depresyon müdahalesinin bir bileşeni olarak kullanılmıştır. Yürütülen deneysel çalışmalar sonucunda depresif belirtileri azaltmada tek başına yeterli ve etkili olduğu kanıtlanan DA, bağımsız bir model olarak geliştirilmeye başlanmıştır (Lewinsohn, 1979; Jacobson 1996; Zeiss vd., 1979). DA' ya yönelik yürütülen çalışmalar DA'nın depresyon müdahalesinde etkili alternatif bir terapi modeli olduğunu göstermektedir (Cuijpers vd., 2007; Ekers vd., 2008; Pott vd., 2022; Stein vd., 2021). DA günümüzde kanıta dayalı bağımsız bir terapi modeli olarak kabul edilmektedir (Lejuez vd., 2001; Martell vd., 2001; Pass vd., 2018). DA teorisinde bireyin olumlu pekiştirme kaynaklarıyla ilişki kurması ve sosyal alanlarda keyif alınan davranışlarının artması aktivasyon; olumlu pekiştirme kaynaklarının azalması ve sosyal faaliyetlerden uzaklaşması ise kaçınma olarak kavramsallaştırılmıştır (Barlow, 1984; Lewinsohn, 1979; Mazzucchelli vd., 2009; Sturmey, 2009). DA temelde depresif bireylerin çeşitli keyif verici aktivitelerden uzaklaştıklarını ve bu sayede aktivasyon seviyelerinin düştüğünü, kaçınma davranışının ise arttığını vurgulamaktadır (Ferster, 1973). Bireyler olumlu pekiştirme kaynaklarından uzaklaştıkça çevrelerinden ödül alma yetenekleri de azalır ve bu durum depresyon olarak sınıflandırılan semptom ve davranışlara yol açar (Kanter vd., 2006; Martell vd., 2010). DA depresyonu azaltmak için bireyin istikrarlı olumlu pekiştirme kaynaklarıyla temas kurmasına katkıda bulunarak yeni beceriler kazanmasına ve anlam dolu bir yaşam yaratmasına katkıda bulunur (Kanter vd., 2006).

DA'nın birçok özelliğini bulunması aynı zamanda bu özelliklerin çeşitli ölçme araçlarıyla ölçülmesi ihtiyacını da ortaya çıkarmıştır (Manos vd., 2011). Bu eksiklerin giderilmesine yönelik Manos ve ark. (2011) DA terapisinde davranışlarda meydana gelen değişimleri ölçmek amacıyla Davranışsal Aktivasyon Depresyon Ölçeği-Kısa Formu'nu (DADÖ-KF) geliştirmişlerdir. DADÖ-KF Davranışsal Aktivasyon Depresyon Ölçeği'nin (DADÖ) kısa formudur. Açımlayıcı ve doğrulayıcı faktör analizleri sonucunda iç tutarlılık katsayısı iyi düzeyde (α=.81) olan dokuz maddeli ve iki alt boyutlu (aktivasyon ve kaçınma) DADÖ-KF geliştirilmiştir. DADÖ-KF'nin iki alt boyutundan aktivasyon ile depresyon arasında pozitif bir ilişki bulunmaktadır. Ölçek uyarlama çalışmaları zamandan tasarruf sağlamanın yanında elde edilen verilerin genellemesine, toplumlar arasındaki benzerlikler ve farklılıkların ortaya konmasına katkıda bulunur (Çapık vd., 2018). Bu nedenle DA'ya ilişkin çalışmaların uyarlanması farklı kültürlerde tekrarlanması önemlidir (Kanter vd., 2006). DADÖ-KF bu anlamda Almanca, Japonca, Fransızca, Brezilya-Peru dillerine başarılı bir şekilde uyarlanmıştır. Türkçe'ye uyarlama çalışmasının kültürler arası çalışmalara katkıda bulunması ve depresyon müdahalelerinde ve DA terapisi uygulamalarında kullanılması beklenmektedir. Türkiye'de DA terapisinin etkili bir model olduğuna yönelik bir çalışma bulunmasına rağmen aktivasyon düzeyleri ölçülmemiş ve bunun bir sınırlılık meydan getirdiği dolayısıyla yürütülecek olan çalışmalarda depresif bireylerin aktivasyon ve kaçınma düzeylerini ölçülmesi gerektiği vurgulanmıştır (Koşan ve Seçer, 2022). Bu doğrultuda araştırmada DADÖ-KF'nin psikometrik özelliklerinin Türkçe'ye uyarlanması ve değerlendirilmesi amaçlanmıştır.

Yöntem: Veri toplama süreci pandemi dönemine denk geldiği için çevrimiçi bir form oluşturulmuştur. Katılımcılara ulaşmak için çeşitli üniversitelerdeki öğretim elemanlarına ulaşılmış ve çalışma formlarını çevrimiçi sınıflarda paylaşmaları istenmiştir. Dolayısıyla bu çalışmada uygun örnekleme yöntemi kullanılmıştır. Katılımcılardan öncelikle bilgilendirilmiş onam formunu doldurmaları istenmiş ardından çeşitli demografik değişkenlerin yer aldığı kişisel bilgi formu ile araştırmada kullanılan Davranışsal Aktivasyon Depresyon Ölçeği-Kısa Formu (DADÖ-KF) (Manos vd., 2011), Beck Depresyon Envanteri (BDE) (Hisli, 1989) ve Yaşam Doyumu Ölçeği (YDÖ) (Dağlı ve Baysal 2016) doldurmaları istenmiştir. Toplam 540 katılımcı (368 Kadın; 172 Erkek) çevrimiçi formları doldurmuştur. Katılımcıların yaşları 18-44 (M=22,57 SD=3,670) arasında değişmektedir. Katılımcılar (N=540) lisans eğitimine devam eden üniversite öğrencileridir. Katılımcıların psikolojik durumlarını kontrol etmek amacıyla demografik formda psikiyatrik bir tanılarının olup olmadığı sorulmuştur. Bu doğrultuda klinik tanı alanlar veri setinden çıkarılmıştır.

Sonuçlar: Ölçek uyarlama çalışmalarında sadece DFA kullanmak DFA'yı keşfedici bir modele dönüştürebilir. Bu nedenle ilk aşamada AFA daha sonrasında DFA'nın kullanılması daha güçlü sonuçlar vermektedir (Orçan, 2018; Schmitt, 2011). Bu doğrultuda ilk önce DAD-KF'nin 9 maddelik formu üzerinde AFA gerçekleştirilmiştir. AFA gerçekleştirilmeden önce uç değer analizi yapılmış ve iki katılımcıya ait verilerin uç değer taşıdığı belirlenerek veri setinden çıkarılmıştır. AFA için yaşları 18-40 (M=22,74 SD=4,028) arasında değişen 256 (179 Kadın; 77 Erkek) katılımcıya ait veriler analiz edilmiştir. İlk AFA

sonucunda öz değeri 1'den yüksek toplam varyansın %56,40'ını açıklayan ve madde yük değerleri .549 ile .839 arasında değişen iki faktörlü bir yapı elde edilmiştir. Ölçeğin Toplamı için Cronbach's α = .72 olarak bulunmuştur. Ölçekte 8. madde (Beni kötü hissetmekten alıkoyacak etkinliklerle meşgul oldum) her iki faktörde .30 üzerinde yük aldığı belirlenmiştir. Erkuş (2007) bir faktörde .30 ile .35 yük alan maddenin başka faktörlerde de benzer yük verebileceğini ve kompleks bir maddeyle karşı karşıya olunduğunu dolayısıyla bu durumda maddenin ya çıkarılması ya da çeşitli döndürme teknikleriyle ölçeğin yapısının tekrar incelenmesi gerektiğini belirtmektedir. Ayrıca Fransızca, Almanca ve Japonca uyarlamalarında da 8 nolu maddenin de benzer nedenlerle analizlerden çıkarıldığı görülmektedir (Fuhr vd., 2016; Wagener vd., 2015; Yamamato, 2015). Bu doğrultuda sekiz nolu madde incelenmiş ve çeşitli uzman görüşlerine de başvurulak ölçekten çıkarılmasına karar verilmiştir. Daha sonra sekiz maddeden oluşan yapı için tekrardan AFA uygulanmıştır (Bkz. Tablo 1). İkinci AFA'da tekrardan KMO= .82 ve Bartlett Küresellik Testi (X^2=607.894, p= 0.000) değerleri hesaplanarak örneklem büyüklüğünü ve verilerin analize uygun olduğu görülmüştür. Bu doğrultuda sekiz nolu madde incelenmiş ve çeşitli uzman görüşlerine de başvurulak ölçekten çıkarılmasına karar verilmiştir. Daha sonra sekiz maddeden oluşan yapı için tekrardan AFA uygulanmıştır (Bkz. Tablo 1). İkinci AFA'da tekrardan KMO= .82 ve Bartlett Küresellik Testi (X^2=607.894, p= 0.000) değerleri hesaplanarak örneklem büyüklüğünü ve verilerin analize uygun olduğu görülmüştür.

DADÖ-KF'nin iki faktörlü yapısının model uyumunu belirlemek içi ise DFA uygulanmıştır. Analiz gerçekleştirilmeden önce örneklem grubuna ait veriler için uç değer analizi yapılmış ve yedi katılımcıya ait veriler uç değer taşıdığından veri setinden çıkarılmıştır. DFA yaşları 18-44 (M=22,36 SD=3,278) arasında değişen 275 (184 Kadın; 91 Erkek) katılımcıdan oluşan örneklem grubuyla gerçekleştirilmiştir. İkinci örneklem grubu için sekiz maddenin skewness değerleri -0.04 ile 0.45 kurtosis değerleri -0.47 ile -0.91 arasında bulunmuş ve normal dağılımdan büyük bir sapma olmadığı belirlenmiştir. DADÖ-KF'nin faktör yapısı χ2 (p = .052, > .05) değerinin anlamlı olmaması ve RMSEA değerinin 0.05'ten küçük (RMSEA= 0.046) olması iyi bir uyum düzeyinin yakalandığını göstermektedir (Bentler 1990; Schermelleh vd., 2003; Schumacker ve Lomax, 2004; Tabachnick ve Fidell, 2007). Bu doğrultuda sekiz nolu madde incelenmiş ve çeşitli uzman görüşlerine de başvurulak ölçekten çıkarılmasına karar verilmiştir. Daha sonra sekiz maddeden oluşan yapı için tekrardan AFA uygulanmıştır (Bkz. Tablo 1). İkinci AFA'da tekrardan KMO= .82 ve Bartlett Küresellik Testi (X^2=607.894, p= 0.000) değerleri hesaplanarak örneklem büyüklüğünü ve verilerin analize uygun olduğu görülmüştür. DADÖ-KF'nin iki faktörlü yapısının model uyumunu belirlemek içi ise DFA uygulanmıştır. Analiz gerçekleştirilmeden önce örneklem grubuna ait veriler için uç değer analizi yapılmış ve yedi katılımcıya ait veriler uç değer taşıdığından veri setinden çıkarılmıştır. DFA yaşları 18-44 (M=22,36 SD=3,278) arasında değişen 275 (184 Kadın; 91 Erkek) katılımcıdan oluşan örneklem grubuyla gerçekleştirilmiştir. İkinci örneklem grubu için sekiz maddenin skewness değerleri -0.04 ile 0.45 kurtosis değerleri -0.47 ile -0.91 arasında bulunmuş ve normal dağılımdan büyük bir sapma olmadığı belirlenmiştir. DADÖ-KF'nin faktör yapısı χ2 (p = .052, > .05) değerinin anlamlı olmaması ve RMSEA değerinin 0.05'ten küçük (RMSEA= 0.046) olması iyi bir uyum düzeyinin yakalandığını göstermektedir (Bentler 1990; Schermelleh vd., 2003; Schumacker ve Lomax, 2004; Tabachnick ve Fidell, 2007).

Örneklem grubu hafif depresif belirtileri olan bir örneklem grubunu temsil etmektedir. DADÖ-KF ye ilişkin olarak tüm ölçek için Cronbach's α = .70 olarak bulunmuştur. Aktivasyon alt boyutu için Cronbach's α = .83, kaçınma alt boyutu için α = .55 olarak hesaplanmıştır. Tüm ölçek ve aktivasyon alt boyutu için Cronbach's α değerleri kabul edilebilir düzeydeyken kaçınma alt boyutuna ilişkin Cronbach's α değeri zayıf ancak kabul edilebilir bir düzeydedir (Jain ve Angural, 2017). Tüm örneklem grubu (N=532) için DADÖ-KF toplam puanı ve alt boyutlarının diğer ölçeklerle (BDÖ ve YDÖ) arasındaki pearson korelasyonları hesaplanmıştır. Bu doğrultuda çeşitli ilişkiler ortaya çıkmıştır. DADÖ-KF toplam ve Aktivasyon alt boyutunun beklendiği gibi; depresif belirtiler (BDÖ; r = -.41 ve -.34) ile anlamlı negatif, yaşam doyumu (YDÖ; r = .57 ve .55) anlamlı pozitif ilişkiler içerisinde olduğu belirlenmiştir. Kaçınma alt boyutunun ise; depresif belirtiler (BDÖ; r = .26) ile anlamlı pozitif ve yaşam doyumu (YDÖ; r = -.22) anlamlı negatif bir ilişkisi olduğu belirlenmiştir.

Öneriler: Sonuç olarak DADÖ-KF Türkçe'ye uyarlamasında yetişkinlerde davranışsal aktivasyonun bir ölçüsü olarak kabul edilebilir. Yapılan AFA ve DFA sonucunda ölçeğin geçerlik koşullarını sağladığı ve iyi bir uyum düzeyine sahip olduğu görülmektedir. Ölçeğin güvenirliğine ilişkin her ne kadar kaçınma alt boyutunda düşük bir alfa değeri gözlemlense de bu kabul edilebilir düzeyde bir alfa değeridir. Ölçeğin

2-5 ve 9. Maddeleri aktivasyon boyutunu 1,6 ve 7. Maddeler kaçınma boyutunu temsil etmektedir. Puanlama yapılırken ölçeğin iki alt boyutuna ait toplam puanlarda da hesaplanabilir. Alt boyutlar hesaplanırken puanlar ters çevrilmeden hesaplanmalıdır. Toplam puan hesaplanırken kaçınma boyutundaki maddeler (1,6 ve 7) ters çevrilerek toplam puan alınmalıdır.

Bu çalışmada klinik olmayan hafif depresyonu olan bir örneklem grubuyla çalışma yürütülmüştür. Bu bir sınırlılık olarak görülebilir. Orijinal çalışmada klinik örneklem grubu da bulunmaktadır. Bu nedenle gelecekte yürütülecek çalışmalarda klinik bir örneklem grubu üzerinde çalışmanın tekrar edilmesi önerilir.

REFERENCES/KAYNAKÇA

Armento, M. E. A., & Hopko, D. R. (2007). The Environmental Reward Observation Scale (EROS): Development, Validity, and Reliability. *Behavior Therapy*, *38*(2), 107-119. https://doi.org/https://doi.org/10.1016/j.beth.2006.05.003

Aschar, S. C. A. L., Claro, H. G., Fernandes, I. F. d. A. L., Daley, K., Castro, H. C. M., Santos, D. V. C. d., Rocha, T. I. U., Hungerbuehler, I., Araya, R., & Menezes, P. R. (2021). Cultural Adaptation and Psychometric properties of Brazilian and Peruvian versions of the Behavioral Activation for Depression Scale Short Form (BADS-SF). In: Research Square.

Barlow, D. H., Hayes, S. C., & Nelson-Gray, R. O. (1984). *The scientist practitioner: Research and accountability in clinical and educational settings*. Pergamon.

Bartlett, M. S. (1954). A Note on the Multiplying Factors for Various χ² Approximations. *Journal of the Royal Statistical Society. Series B (Methodological)*, *16*(2), 296-298. http://www.jstor.org/stable/2984057

Beck, A. T. (1979). *Cognitive therapy of depression*. Guilford press.

Beck, A. T., Ward, C. H., Mendelson, M., Mock, J., & Erbaugh, J. (1961). An Inventory for Measuring Depression. *Archives of General Psychiatry*, *4*(6), 561-571. https://doi.org/10.1001/archpsyc.1961.01710120031004

Bentler, P. M. (1990). Comparative fit indexes in structural models. *Psychological bulletin*, *107*(2), 238-246. https://doi.org/10.1037/0033-2909.107.2.238

Çapık, C., Gözüm, S., & Aksayan, S. (2018). Kültürlerarası ölçek uyarlama aşamaları, dil ve kültür uyarlaması: Güncellenmiş rehber. *Florence Nightingale Journal of Nursing*, *26*(3), 199-210. https://doi.org/DOI: 10.26650/FNJN397481

Carvalho, J. P., Gawrysiak, M. J., Hellmuth, J. C., McNulty, J. K., Magidson, J. F., Lejuez, C. W., & Hopko, D. R. (2011). The Reward Probability Index: Design and Validation of a Scale Measuring Access to Environmental Reward. *Behavior Therapy*, *42*(2), 249-262. https://doi.org/https://doi.org/10.1016/j.beth.2010.05.004

Coto-Lesmes, R., Fernández-Rodríguez, C., & González-Fernández, S. (2020). Acceptance and Commitment Therapy in group format for anxiety and depression. A systematic review. *Journal of Affective Disorders*, *263*, 107-120. https://doi.org/https://doi.org/10.1016/j.jad.2019.11.154

Cuijpers, P., van Straten, A., & Warmerdam, L. (2007). Behavioral activation treatments of depression: A meta-analysis. *Clinical Psychology Review*, *27*(3), 318-326. https://doi.org/https://doi.org/10.1016/j.cpr.2006.11.001

Dağlı, A., & Baysal, N. (2016). Adaptation of the satisfaction with life scale into Turkish: The study of validity and reliability. *Electronic Journal of Social Sciences*, *15*(59), 1250-1262.

Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The Satisfaction With Life Scale. *Journal of Personality Assessment*, *49*(1), 71-75. https://doi.org/10.1207/s15327752jpa4901_13

Dimidjian, S., Barrera, M., Martell, C., Muñoz, R. F., & Lewinsohn, P. M. (2011). The origins and current status of behavioral activation treatments for depression. *Annual review of clinical psychology*, *7*, 1-38. https://doi.org/10.1146/annurev-clinpsy-032210-104535

Ekers, D., Richards, D., & Gilbody, S. (2008). A meta-analysis of randomized trials of behavioural treatment of depression. *Psychological Medicine*, *38*(5), 611-623. https://doi.org/10.1017/S0033291707001614

Erkuş, A. (2007). Ölçek geliştirme ve uyarlama çalışmalarında karşılaşılan sorunlar. *Türk Psikoloji Bülteni*, *13*(40), 17-25.

Ferster, C. B. (1973). A functional anlysis of depression. *The American psychologist*, *28*(10), 857-870. https://doi.org/10.1037/h0035605

Fuhr, K., Hautzinger, M., Krisch, K., Berking, M., & Ebert, D. D. (2016). Validation of the Behavioral Activation for Depression Scale (BADS)—Psychometric properties of the long and short form. *Comprehensive Psychiatry*, *66*, 209-218. https://doi.org/https://doi.org/10.1016/j.comppsych.2016.02.004

Geisinger, K. F. (1994). Cross-Cultural Normative Assessment: Translation and Adaptation Issues Influencing the Normative Interpretation of Assessment Instruments. *Psychological Assessment*, *6*, 304-312.

Grosscup, S. J., & Lewinsohn, P. M. (1980). Unpleasant and pleasant events, and mood. *Journal of clinical psychology*, *36*(1), 252-259. https://doi.org/10.1002/1097-4679(198001)36:1<252::aid-jclp2270360131>3.0.co;2-s

Henson, R. K., & Roberts, J. K. (2006). Use of Exploratory Factor Analysis in Published Research: Common Errors and Some Comment on Improved Practice. *Educational and Psychological Measurement*, *66*(3), 393-416. https://doi.org/10.1177/0013164405282485

Hisli, N. (1989). A reliability and validity study of Beck Depression Inventory in a university student sample. *J Psychol*, *7*(23), 3-13.

Jacobson, N. S., Dobson, K. S., Truax, P. A., Addis, M. E., Koerner, K., Gollan, J. K., Gortner, E., & Prince, S. E. (1996). A component analysis of cognitive-behavioral treatment for depression. *Journal of consulting and clinical psychology*, *64*(2), 295.

Jain, S., & Angural, V. (2017). Use of Cronbach's alpha in dental research. *Medico Research Chronicles*, *4*(03), 285-291.

Kaiser, H. F., & Rice, J. (1974). Little Jiffy, Mark Iv. *Educational and Psychological Measurement*, *34*(1), 111-117. https://doi.org/10.1177/001316447403400115

Kanter, J. W., Mulick, P. S., Busch, A. M., Berlin, K. S., & Martell, C. R. (2006). The Behavioral Activation for Depression Scale (BADS): Psychometric Properties and Factor Structure. *Journal of Psychopathology and Behavioral Assessment*, *29*(3), 191. https://doi.org/10.1007/s10862-006-9038-5

Kline, R. B. (2011). *Principles and practice of structural equation modeling, 3rd ed*. Guilford Press.

Koşan, Y., & Seçer, İ. (2022). Adaptation of Adolescent Behavioral Activation Program and Investigation of Its Effectiveness by Mixed Method. *Current Approaches in Psychiatry/Psikiyatride Guncel Yaklasimlar*, *14 (ek 1), 293-307*. https://doi.org/10.18863/pgy.1188941

Krings, A., Bortolon, C., Yazbek, H., & Blairy, S. (2021). Psychometric Properties and Factor Structure of the French Version of the Behavioral Activation for Depression Scale (BADS) in Non-Clinical Adults. *Psychologica Belgica*, *61*(1), 20-32. Retrieved 2021/02//, from https://doi.org/10.5334/pb.542

Lau, C., Chiesi, F., Hofmann, J., Ruch, W., & Saklofske, D. H. (2020). Cheerfulness and life satisfaction mediated by self-esteem and behavioral activation: A serial mediation model. *Personality and Individual Differences*, *166*, 110175. https://doi.org/https://doi.org/10.1016/j.paid.2020.110175

Lejuez, C. W., Hopko, D. R., & Hopko, S. D. (2001). A brief behavioral activation treatment for depression: Treatment manual. *Behavior Modification*, *25*(2), 255-286. https://doi.org/10.1177/0145445501252005

Lewinsohn, P. M., & Talkington, J. (1979). Studies on the measurement of unpleasant events and relations with depression. *Applied Psychological Measurement*, *3*(1), 83-101. https://doi.org/10.1177/014662167900300110

MacPhillamy, D. J., & Lewinsohn, P. M. (1982). The pleasant events schedule: Studies on reliability, validity, and scale intercorrelation. *Journal of consulting and clinical psychology*, *50*(3), 363-380. https://doi.org/10.1037/0022-006X.50.3.363

Manos, R. C., Kanter, J. W., & Busch, A. M. (2010). A critical review of assessment strategies to measure the behavioral activation model of depression. *Clinical Psychology Review*, *30*(5), 547-561. https://doi.org/https://doi.org/10.1016/j.cpr.2010.03.008

Manos, R. C., Kanter, J. W., & Luo, W. (2011). The Behavioral Activation for Depression Scale–Short Form: Development and Validation. *Behavior Therapy*, *42*(4), 726-739. https://doi.org/https://doi.org/10.1016/j.beth.2011.04.004

Martell, C. R., Addis, M. E., & Jacobson, N. S. (2001). *Depression in context: Strategies for guided action*. W W Norton & Co.

Martell, C. R., Dimidjian, S., & Herman-Dunn, R. (2010). *Behavioral activation for depression: A clinician's guide*. Guilford Press.

Mazzucchelli, T., Kane, R., & Rees, C. (2009). Behavioral Activation Treatments for Depression in Adults: A Meta-analysis and Review *Clinical Psychology: Science and Practice*, *16*(4), 383-411. https://doi.org/https://doi.org/10.1111/j.1468-2850.2009.01178.x

Mohammadi, A., & Amiri, M. (2010). Behavioral Activation for Depression Scale: Psychometric properties and confirmatory factor analysis for Persian version. *Iranian Journal of Psychiatry and Clinical Psychology*, *16*(1), 65-73.

Orçan, F. (2018). Exploratory and confirmatory factor analysis: Which one to use first? *Journal of Measurement and Evaluation in Education and Psychology*, *9*(4), 414-421. https://doi.org/https://doi.org/10.21031/epod.394323

Panayides, P. (2013). Coefficient Alpha: Interpret With Caution. *Europe's Journal of Psychology*, *9*(4), 687–696. https://doi.org/10.5964/ejop.v9i4.653

Pass, L., Hodgson, E., Whitney, H., & Reynolds, S. (2018). Brief Behavioral Activation Treatment for Depressed Adolescents Delivered by Nonspecialist Clinicians: A Case Illustration. *Cognitive and Behavioral Practice*, *25*(2), 208-224. https://doi.org/https://doi.org/10.1016/j.cbpra.2017.05.003

Pott, S. L., Delgadillo, J., & Kellett, S. (2022). Is behavioral activation an effective and acceptable treatment for co-occurring depression and substance use disorders? A meta-analysis of randomized controlled trials. *Journal of Substance Abuse Treatment*, *132*, 108478. https://doi.org/https://doi.org/10.1016/j.jsat.2021.108478

Radloff, L. S. (1977). The CES-D Scale: A Self-Report Depression Scale for Research in the General Population. *Applied Psychological Measurement*, *1*(3), 385-401. https://doi.org/10.1177/014662167700100306

Schermelleh-Engel, K., Moosbrugger, H., & Müller, H. (2003). Evaluating the Fit of Structural Equation Models: Tests of Significance and Descriptive Goodness-of-Fit Measures. *Methods of Psychological Research*, *8*(2), 23-74.

Schmitt, T. A. (2011). Current Methodological Considerations in Exploratory and Confirmatory Factor Analysis. *Journal of Psychoeducational Assessment*, *29*(4), 304-321. https://doi.org/10.1177/0734282911406653

Schumacker, R. E., & Lomax, R. G. (2004). *A beginner's guide to structural equation modeling, 2nd ed*. Lawrence Erlbaum Associates Publishers.

Shi, J., Mo, X., & Sun, Z. (2012). [Content validity index in scale development]. *Zhong nan da xue xue bao. Yi xue ban = Journal of Central South University. Medical sciences*, *37*(2), 152-155. https://doi.org/10.3969/j.issn.1672-7347.2012.02.007

Shudo, Y., Yamamoto, T., & Sakai, M. (2016). Longitudinal Predictions of Depression Symptoms Using the Activation and Avoidance Subscales of the Japanese Behavioral Activation for Depression Scale-Short Form. *Psychological Reports*, *120*(1), 130-140. https://doi.org/10.1177/0033294116680794

Stein, A. T., Carl, E., Cuijpers, P., Karyotaki, E., & Smits, J. A. J. (2021). Looking beyond depression: a meta-analysis of the effect of behavioral activation on depression, anxiety, and activation. *Psychological Medicine*, *51*(9), 1491-1504. https://doi.org/10.1017/S0033291720000239

Sturmey, P. (2009). Behavioral Activation Is an Evidence-Based Treatment for Depression. *Behavior Modification*, *33*(6), 818-829. https://doi.org/10.1177/0145445509350094

Tabachnick, B. G., & Fidell, L. S. (2007). *Using multivariate statistics, 5th ed*. Allyn & Bacon/Pearson Education.

Takagaki, K., Jinnin, R., Yokoyama, S., Mori, A., Kambara, K., Okamoto, Y., Miyake, Y., Kagawa, F., & Okamoto, Y. (2021). Relations Among Clinical Factors After Behavioral Activation for Subthreshold Depression. *International Journal of Cognitive Therapy*, *14*(3), 612-622. https://doi.org/10.1007/s41811-021-00108-8

Teismann, T., Ertle, A., Furka, N., Willutzki, U., & Hoyer, J. (2016). The German Version of the Behavioral Activation for Depression Scale (BADS): A Psychometric and Clinical Investigation. *Clinical psychology & psychotherapy*, *23*(3), 217-225. https://doi.org/10.1002/cpp.1948

Thompson, B. (2004). *Exploratory and confirmatory factor analysis: Understanding concepts and applications* [doi:10.1037/10694-000]. American Psychological Association. https://doi.org/10.1037/10694-000

Vilagut, G. (2014). Test-Retest Reliability. In A. C. Michalos (Ed.), *Encyclopedia of Quality of Life and Well-Being Research* (pp. 6622-6625). Springer Netherlands. https://doi.org/10.1007/978-94-007-0753-5_3001

Wagener, A., Van der Linden, M., & Blairy, S. (2015). Psychometric properties of the French translation of the Behavioral Activation for Depression Scale–Short Form (BADS-SF) in non-clinical adults. *Comprehensive Psychiatry*, *56*, 252-257. https://doi.org/https://doi.org/10.1016/j.comppsych.2014.10.008

Weidberg, S., González-Roz, A., García-Fernández, G., & Secades-Villa, R. (2021). Activation level as a mediator between behavioral activation, sex, and depression among treatment-seeking smokers. *Addictive Behaviors*, *114*, 106715. https://doi.org/https://doi.org/10.1016/j.addbeh.2020.106715

Yamamoto, T., Shudo, Y., & Sakai, M. (2015). Development of the Japanese version of Behavioral Activation for Depression Scale-Short Form (BADS-SF) and examination of its reliability and validity. *Japanese Journal of Cognitive Therapy*, *8*, 96-105.

Zeiss, A. M., Lewinsohn, P. M., & Muñoz, R. F. (1979). Nonspecific improvement effects in depression using interpersonal skills training, pleasant activity schedules, or cognitive training. *Journal of consulting and clinical psychology*, *47*(3), 427-439. https://doi.org/10.1037/0022-006X.47.3.427