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ADAPTATION OF THE BRIEF EMOTIONAL EXPERIENCE SCALE TO TURKISH: A STUDY OF VALIDITY AND RELIABILITY

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Summary

The purpose of this study is to adapt the Brief Emotional Experience Scale developed by Rogers et al. (2021) to Turkish and do scientific research on validity and reliability. The Brief Emotional Experience Scale was developed to determine the levels of positive and negative emotions experienced by individuals aged between 18-65. A total of 691 participants, 414 of whom were women and 277 were men, took part in the study from three different research groups. In order to determine the psychometric characteristics, language validity, internal consistency, criterion validity, and confirmatory factor analysis methods were used. The Turkish form of the scale was found to be equivalent to the original form, and the confirmatory factor analysis performed for construct validity has confirmed the two-factor structure that constitutes the sub-dimensions of the original scale. Within the framework of criterion validity, it was seen that there was a significant relationship between brief emotional experience scale, psychological well-being scale, positive experience, and positive affect in a positive direction and that there was a significant relationship between negative experience and negative affect in a negative direction. The Cronbach's alpha coefficient was found to be .76 for the overall scale, .71 for the positive affect sub-dimension, and .77 for the negative affect sub-dimension. Based on the results of the research, it was concluded that the Turkish form of the Brief Emotional Experience Scale is valid and reliable and can be used in scientific research conducted in Turkey.

Keywords: positive emotion, negative emotion, scale adaptation, validity, reliability

INTRODUCTION

Emotions are a concept that has an impact on almost every point of human life, from the way we develop relationships to the way we react to ourselves, our environment, and the situations we encounter. Sigmund Freud, one of the first scientists to refer to the importance of emotions, suggested that some events experienced by individuals leave emotional traces that will shape our lives, emphasizing that emotions are among the main factors underlying mental health problems (Oatley, Keltner & Jenkins, 2006). Therefore, it can be understood that the negative affects experienced by individuals are significant factors in the emergence of psychological problems. Similarly, William James pointed out in his book The Principles of Psychology (1890) that emotions can have an effect on individuals' behavior and how they act. According to him, when faced with a situation, emotions are activated, which causes a number of changes in our bodies.

Therefore, it is also a factor that activates our nervous system.

Watson, Clark, and Tellegen (1985) propose a two-factor model for the classification of emotions. In this two-factor model, emotions are referred to as positive and negative affects. The positive emotion reflects how enthusiastic, active, and alert you feel. High levels of positive affect are a state of high energy, full concentration, and meaningful participation. A state of low positive affects is characterized by sadness and drowsiness. In contrast, negative emotion is a general dimension of subjective distress and unpleasant participation, encompassing a variety of disturbing moods such as anger, contempt, disgust, guilt, fear, and irritability, with high negative affect being a state of stagnation and irritability. It has been stated that individuals with high positive affects report themselves as enthusiastic, confident, and excited compared to those with low positive affects. On the other hand, it has been reported that individuals with high negative affects feel guilty, fearful, and nervous compared to those with low negative affects. Additionally, some studies show that positive affects and negative affects are also related to personality traits. In particular, it has been noted that individuals with neurotic personality traits have more negative affects (Emmons & Diener, 1985).

Emotional states have an impact on many situations in individuals' lives such as decision making, risky behavior development, life satisfaction, and well-being. Isen, Nygren, and Ashby (1988) reported that individuals with a positive affect have high levels of optimism. In addition, it is stated that they are better able to use their ability to think prudently when making decisions. As a matter of fact, it is seen that individuals' being in a state of positive emotions is a factor that positively affects their mental health. On the other hand, it has been stated that negative emotional states can negatively affect the development of risky behaviors, the ability to think clearly through the decisions that individuals will make, and cause a decrease in self-regulation strategies (Leith & Baumeister, 1996). The experience of negative emotions provides immediate adaptive responses that narrow one's thinking and behavior when exposed to negative experiences. The experience of positive emotions expands the person's options for appropriate behavior, providing creative, flexible, and efficient thought patterns. Experiencing positive emotions can reverse or reduce the effects of negative emotions (Fredrickson, 2013). It has been found that positive emotions, which include a multiplicity of positive emotions and less negative emotion components, are associated with better physical and psychological health (Deiner & Chan, 2011; Kok et al., 2013), more life satisfaction, and less stress (Schriffrin & Nelson, 2010). It has been found that positive emotions act as a buffer against the effects of stress (Moskowitz, Shmueli-Blumberg, Acree, and Folman, 2012). Positive affect has a significant positive relationship with action-based problem-oriented coping and a significant negative relationship with acceptance-based emotion-oriented coping (Ben-zur, 2009).

When the literature is examined, it is seen that there are a number of developments related to the measurement of emotional experiences. Green, Goldman and Salovey (1993) studied a checklist of adjectives related to emotions in measuring positive and negative moods. In addition, it is seen that various measurement tools have been developed, such as Tangney's (1990) measuring shame and guilt; Watson, Clark and Tellegen's (1988) measuring positive and negative emotion.

In the literature, the importance of a short emotional experience scale is pointed out along with the existence of measurement tools developed to measure emotional experience. As a matter of fact, Rogers et al. (2021) state that the reason for the development of the Brief Emotional Experience scale is that there is currently a gap in the literature for a short self-report measurement tool that includes both positive and negative emotion, and emphasize the importance of the measurement tool they developed. In addition, they stated that there are demands for a very short measure of emotional well-being that is well validated in the field for use in longitudinal emotional experience monitoring. The aim of this study is to do a scientific adaptation, validity, and reliability study in the Turkish culture sample of the Brief Emotional Experience Scale developed by Rogers et al. (2021).

METHOD

Research group

Within the framework of the adaptation study of the Brief Emotional Experience Scale, the data were collected using an easily accessible online sampling method via the Internet. In order to test the language validity, the data were collected from 46 people between the ages of 18-65. Among the participants of the test for language validity, there were 22 men and 24 women (%52,2 women, %47.8 men, $\overline{X}$ =39.65 age, Ss=15.43). 312 people, 184 women and 128 men, between the ages of 18-65 participated in the confirmatory factor analysis and reliability study, which was conducted within the framework of the construct validity, using the easily accessible sampling method in an online environment via the Internet (%59 women, % 41 men, $\overline{X}$ =39.58 age, Ss=15.03). For criterion validity, data were collected from 333 participants, 206 female and 127 male, between the ages of 18-65 (%61,9 women, %38,1 men, $\overline{X}$ =41.00, Ss=14,39).

Data collection tools

The Brief Emotional Experience Scale (BEES):

The Brief Emotional Experience scale was developed by Rogers et al. (2021) in order to determine the positive and negative affects experienced by individuals in their lives and to reveal the dominant emotional state. The 6-item Short Emotional Experience Scale consists of 2 subscales, positive emotion, and negative emotion. Answer options are on a 4-point Likert-type scale ranging from 0 (never) to 3 (too much). Cronbach alpha values for the original scale ranges from .76 to .84.

Psychological Wellbeing Scale (PWB)

It was developed by Diener and others (2010) in a shorter and holistic way for

existing measures of psychological well-being. The adaptation study to Turkish was carried out by Telef in 2011. Cronbach alpha internal consistency coefficient obtained in the reliability study of the scale was found to be .80. According to the test-retest result, there was a positive and significant relationship between the first and second applications of the scale ($r = .86$, $p < .01$). The items of the scale are scored between 1-7 as strongly disagree (1) and strongly agree (7), and the possible scores range from 8 to 56. A high score indicates that the person has a lot of psychological resources and strength (Telef, 2013). The reliability coefficient of the scale for the sample group of this study was found to be .86.

Positive and Negative Affect Schedule (PANAS)

The scale developed by Watson, Clark, & Tellegen (1988) consists of 20 items. While ten of these items consist of positive emotions used to measure positive affect (for example; interested, excited, determined), the other ten consist of negative emotions used to measure negative affect (for example; unhappy, embarrassed, scared). The scale is a five-point Likert scale, rated from 1 (never experienced) to 5 (experienced a lot). The lowest score that can be obtained from the scale for each factor (positive emotion-negative emotion) is 1; the highest score is 50. A high score to be obtained from positive items of the scale indicates positive emotions; a high score to be obtained from negative items indicates negative emotions. The internal consistency coefficient for the positive affect factor in the Turkish adaptation of the scale is .86 and .83 for the negative affect (Gençöz, 2000).

Scale of Positive and Negative Experience (SPANE)

The Scale of Positive and Negative Experiences was developed by Diener and colleagues (2010) to evaluate positive and negative emotions. There are 12 items on the scale, six of which are positive and six of which are negative. The scale is scored between 1 and 5 and is rated as 1 (rarely or never), 5 (very often or always). The adaptation of the scale to Turkish was made by Telef (2015) and it was found that the scale showed good compliance values and had strong internal consistency values.

Process

For the adaptation study of the Brief Emotional Experience Scale; firstly, Rogers was contacted by e-mail on behalf of the team that developed the scale. Afterward, the scale was first translated into Turkish by 6 experts who were fluent both in English and Turkish languages. The Turkish form was then translated back into English again by 4 experts and the consistency between the two forms was examined. It has been observed that the new form does not differ from the original form in terms of meaning and grammar. Later, 5 experts working in the guidance and psychological counseling department examined the scale and expressed their opinion that the scale was applicable. After that, the English form was administered to 46 participants between the ages of 18-65 who were fluent in English and Turkish, and the Turkish form was administered 2

weeks later. In the analysis of the data, language validity, criterion-related validity, internal consistency reliability, and confirmatory factor analysis methods were applied. Confirmatory factor analysis is a technique based on the testing of theories related to hidden variables and it is used in advanced research (Tabachnick and Fidell, 2001). Based on the data obtained from the measurement tool developed in accordance with a previously determined theoretical structure in confirmatory factor analysis, it is attempted to test whether this structure has been verified or not (Maruyama, 1998). In scale adaptation studies, confirmatory factor analysis should be performed instead of explanatory factor analysis to test whether the model in the original research is validated in the target culture (Seçer, 2015). For this reason, confirmatory factor analysis was preferred in the adaptation study of the Brief Emotional Experience Scale. Within the scope of the criterion validity of the Brief Emotional Experience Scale; the relationship between the Positive and Negative Affect Schedule, the Psychological Well-Being Scale, and the Positive-Negative Experience Scale were examined. Internal consistency coefficients were calculated for the reliability of the scale.

FINDINGS

Language Validity

In order to determine the language validity, the English form was administered to 46 adult individuals between the ages of 18-65 who were fluent in English and Turkish, and the Turkish form was administered to the same group 14 days later. Correlation coefficients between English form and Turkish form scores are given in table 1, item correlations in table 2, and dependent group t-test results in table 3

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Table 1. Pearson product-moment correlation analysis results for the relationship between the original form and the Turkish form

Application	N	$\bar{X}$	Ss	*r*
Original Form	46	1,52	3,34	*.95***
Turkish Form	46	1,39	3,39	

P<0.01**

When Table 1 is examined, the correlation coefficient between the original and Turkish form scores was found to be *r=.95* (p<0.01). In addition, when looking at the correlation between the original and Turkish form scores according to the sub-dimensions; the correlation coefficient was found to be *r=.92*, for the positive affect sub-dimension and*r=.95* for the negative affect sub-dimension. In light of the findings, it can be stated that the original form and the Turkish form are equivalent.

Table 2. Item correlation coefficients between the original form and the Turkish form

	N	*r*	p
Tr 01 & En 01	46	.72	.000
Tr 02 & En 02	46	.98	.000
Tr 03 & En 03	46	.88	.000
Tr 04 & En 04	46	.78	.000
Tr 05 & En 05	46	.93	.000
Tr 06 & En 06	46	.91	.000

**p<.01

When Table 2 is examined, it is seen that the correlation coefficient between the items of the original form and the Turkish form is statistically significant (p<.01).

Table 3. The results of the dependent group t-test for linguistic equivalence

		$\bar{X}$	Ss	t	p
1	Eng 1	1.61	,577	1.273	,209
	Tr 1	1.52	,658		
2	Eng 2	1.35	,849	-1.000	,323
	Tr 2	1.37	,853		
3	Eng 3	1.48	,781	-.374	,710
	Tr3	1.50	,837		
4	Eng 4	1.22	,758	,275	,785
	Tr 4	1.20	,806		
5	Eng 5	1.70	,891	-.443	,660
	Tr5	1.72	,935		
6	Eng 6	,72	,807	-1.354	,183
	Tr 6	,78	,814		

When Table 3 is examined, it is seen that there is no difference between the original form and the Turkish form of the Brief Emotional Experience Scale according to the results of the dependent group t-test analysis (p<.05). In addition, when looking at the results of the dependent group t-test, it appears that there is no problematic item. Thus, it can be said that the original form and the Turkish forms are equivalent in terms of linguistic validity based on the items. When all the analyses for language validity are evaluated, it can be stated that the original form and the Turkish form are equivalent.

Construct Validity

Confirmatory factor analysis was performed to verify the two-factor structure of the Brief Emotional Experience Scale in a sample of participants aged between 18-65. x^2 / df ≤ 3, GFI, NFI, CFI, IFI ≥ .90, RMSEA ≤ .08 values were accepted as the fit index criteria of the model (Çokluk, Şekercioğlu & Büyüköztürk, 2010). According to the results of confirmatory factor analysis; by confirming the two-factor structure in the original form, it can be said that the measurement tool has acceptable values in

the Turkish sample. Compliance indices for the measuring tool are given in Table 4.

Table 4. Values of the Brief Emotional Experience Scale for Goodness-of-fit Indices

Model	*x2*	*df*	GFI	RMSEA	NFI	CFI	IFI
2-Factor Model	21.724	8	.97	.07	.94	.96	.96

The results of the examination of the model parameters showed that all factor loads were statistically significant and varied between 0.47 and 0.70. BEES1, BEES3, and BEES5 are items related to the positive affect sub-dimension, and BEES2, BEES4, and BEES6 are related to the negative affect sub-dimension. Information on factor loads is given in Table 5.

Table 5. Factor loads of the items of the Brief Emotional Experience Scale

Items	Factor Loads
BEES 1	,62
BEES 2	,70
BEES 3	,47
BEES 4	,68
BEES 5	,64
BEES 6	,65

Criterion-related Validity

For the criterion-related validity of the Brief Emotional Experience Scale, the relationships between the Positive and Negative Affect Schedule, the Psychological Well-Being Scale, and the Positive-Negative Experience Scale were examined. The results showing the correlation coefficients and descriptive statistics between the scales and the sub-dimensions can be found in Table 6.

Table 6. Correlation coefficients for the relationships between the Brief Experience Scale and Psychological Well-Being, Positive-Negative Experience Scale, Positive-Negative Affect Schedule

Variables	1	2	3	4	5	6	7	8
1. BEES-total score	1	.83**	-.87**	.41**	.66**	-.64**	.50**	-.65**
2. BEES-positive affect		1	-.46**	.40**	.59**	-.42**	.45**	-.40**
3.BEES-negative			1	-.31**	-.55**	.65**	-.39**	.69**

affect								
4.PWS				1	.51**	-.31**	.54**	-.23**
5.Positive experience					1	-.56**	.70**	-.49**
6. Negative experience						1	-.41**	.74**
7. PANAS-positive affect							1	-.27**
8. PANAS-negative affect								1
Average ($\bar{X}$)	1.15	4.48	3.33	39.24	20.26	15.12	30.43	21.12
Standard Deviation	3.15	1.71	1.97	12.02	4.99	4.57	8.30	7.98

P<0.01**

When Table 6 is examined, it can be seen that there are positive relationships between the Brief Emotional Experience Scale, Psychological Well-being (*r=.41*), and positive experience(*r=.66*) and positive affect(*r=.50*) while there is a negative relationship between negative experience (*r= -.64*) and negative affect (*r= -.65*). In addition, it is seen that there is a positive correlation between the positive emotion sub-dimension and psychological well-being (*r=.40*),positive experience(*r=.59*) and positive affect(*r=.45*) while there are negative relationships between negative emotion sub-dimension and psychological well-being (*r= -.31*), positive experience (*r= -.55*) and positive affect (*r= -.39*) . In addition, negative affect sub-dimension and negative experience (*r= .65*) and negative affect (*r= .69*) are positively correlated. According to these results, it can be stated that the brief emotional experience scale is valid.

A Study of Reliability

The Cronbach alpha internal consistency reliability coefficient for the entire Brief Emotional Experience Scale was .76, .71 for the positive affect sub-dimension, and .77 for the family negative affect sub-dimension.

Discussions, Conclusions and Recommendations

This research was conducted in order to adapt the "Brief Emotional Experience Scale" developed by Rogers et al. into Turkish. For this purpose, first of all, the original form of the scale was translated into Turkish by 6 people who were fluent in English and Turkish. Then, 4 independent experts translated the scales back into English. In the end, it was seen that the Turkish form was ready for application.

The construct validity results for the brief emotional experience scale show that the scale is a valid measurement tool. The confirmatory factor analysis shows that the two sub-dimensions of the scale, positive and negative emotion, in the original form of the scale, are compatible between acceptable values. Correlation coefficients obtained as a result of DFA ranges between .47 and .70. It is stated that the representation power of the items with correlation coefficients of .30 and above is sufficient (Büyüköztürk, 2018). From this point of view, we can say that the

correlation coefficient values of all the items of the scale are sufficient. Therefore, no item was removed as a result of the adaptation study. The findings show that the brief emotional experience scale has validity in Turkish culture.

For the criterion validity study of the brief emotional experience scale, the relationships between positive and negative emotion scale, psychological well-being scale, and positive-negative experience scale were examined. It has been observed that there are positive and significant relationships between the short emotional experience scale total score and the positive emotion sub-dimension, and psychological well-being, positive experience, and positive affect. It has been determined that there are significant negative relationships between negative experience and negative affect. This situation can be interpreted as ensuring the criterion validity of the scale.

For all reliability studies of the scale, the Cronbach Alpha internal consistency reliability coefficient value was calculated as .76. When we look at the sub-dimensions, it was calculated as .71 for positive emotion and .77 for negative emotion. It is stated by Özgüven (1994) that the Cronbach alpha internal consistency coefficient value should be .70 and above. The findings show that the scale is reliable.

One of the most important limitations of the study is that all the data are filled in by the participants' self-assessment and measurement tools. In this case, the participants may not have given the answer that was most suitable for them. Therefore, collecting data based on observational and various interview techniques can also be useful in terms of collecting detailed information about the subject of emotional experience.

A longitudinal study of emotional experience can be conducted to investigate whether the emotional experiences of individuals have changed over the years. Its relationship with concepts such as depression, life satisfaction, and well-being can also be looked at.

As a result, the study shows that the brief emotional experience scale exhibits psychometrically acceptable compliance values in individuals aged 18-65 in Turkey, that the internal consistency value is high, and the criterion-link validity is also met. In this context, the brief emotional experience scale can be used in future studies.

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