

Full Length Research Paper

Adaptation of the PERMA well-being scale into Turkish: Validity and reliability studies

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Seligman's "well-being scale" PERMA evaluates people's level of well-being in five dimensions: P: Positive and Negative emotions, E: Engagement, R: Relationships, M: Meaning, A: Accomplishment, N: Negative Emotion and H: Health. This scale measures a person's level of well being using five components. The measurement scale developed consists of 23 items with a scoring interval from 0 to 10. The internal consistency coefficient of the scale is 0.82. The adaptation study of the PERMA well-being scale was applied on a group of university students. For language validity, some translation texts (from English to Turkish/from Turkish to English) were given to the students in the department of ELT and positive significant correlations were obtained from the English and Turkish forms ($r=0.95$, $p<0.01$; $r=0.95$, $p<0.01$). The measurement tool with 23 articles and 8 dimensions tested by confirmatory factor analysis was seen to have enough goodness of fit index ($\chi^2/sd=100.96/41$, $p=0.00$, $RMSEA=0.076$, $CFI=0.96$, $GFI=0.93$, $NNFI=0.94$). As a result of the correlation analyses made for the criterion validity of PERMA well-being scale; a significant positive relation was found with subjective well-being scale and psychological well-being scale. The internal consistency coefficient of the scale was $\alpha=0.82$ and test retest correlation was found at 0.81. As a result, the 23-item and eight-dimensional measuring tool became ready for use by the researchers.

Key words: Well-being, positive and negative emotions, occupation, relationships, meaning and success, well-being scale, reliability and validity.

INTRODUCTION

Happiness is an abstract concept and is quite difficult to define. Seligman (2002) analyzed happiness within three different elements: Positive Emotion, Engagement, and Meaning. Each element can be better defined and also be better measured than happiness. Positive emotion helps us to be positive and perceive the environment in a positive manner. Flow can be explained as a person's

flow of thought during an engagement or activity. Meaning questions the purpose of life and plays a role as a bridge between us and our emotions. Seligman (2002) developed the theory. According to him, the theme of positive psychology is happiness and its peak is life satisfaction. At this point, the main theme of positive psychology is well-being and this is measured by

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flourishing. Positive psychology aims to improve this. Seligman also included two different elements in his theory; positive relationships and accomplishment. All the dimensions of well-being can be measured objectively. For example, flow (engagement) is the passage of time and has a different meaning for each person. According to Seligman's (2011) model, flourishing can be described as a dynamic structure of good functioning in many psychosocial areas. Rather than a single concept, it can be described as a combination of multiple concepts and harmonious relations. Five areas defined by the PERMA wellbeing theory were stressed; P: Positive and negative emotions, E: Engagement, R: Relationships, M: Meaning, and A: Accomplishment.

In order to determine the existence and absence of mental health, Keyes (2002, 2005) defined the concept of continuity of mental health. Mental health is not only the absence of mental illness, but is also a concept of the presence of positive emotions and the positive functioning of personal and social life. According to this approach, wellbeing consists of emotional well-being, psychological well-being and social well-being (Lamers et al., 2010). Diener (1984) interprets subjective well-being from a hedonistic point of view and focuses on criteria such as more positive emotions and satisfaction from life. In other words, social acceptance, social realization, social cohesion, social cohesion and social contribution should be components of social well-being (Keyes, 1998).

Ryff (1989) moves from psychological functioning and emphasizes that well-being is different than feeling good. With his multi-dimensional psychological well-being model developed by Ryff, the psychological functioning is based on the following six dimensions: (1) self-acceptance of the individual, (2) being in positive relationships with others, (3) being able to think and act autonomously, (4) to organize the environment in an effective manner, (5) to be an aim in life, and (6) self-development. According to Ryff, well-being is possible by living a functional life in these areas of life.

P: Positive and negative emotions: The first element of the PERMA well-being model is positive feelings that correspond to hedonic happiness feelings like pleasure, fun and joy. According to Seligman (2011), we need a positive feeling in our lives to live well. Positive emotions like commitment, happiness, hopefulness, love and peacefulness, renew our energy and rejuvenate us. In this approach, the emotions are sized from negative to positive and from low to high dimensions within a circumscribed model (Cacioppo et al., 2011; Huelsmann et al., 1998).

E: Engagement: In the PERMA well-being model the second contribution comes from a feeling of full involvement in activities or from interactions that brings engagement. It is also referred to as "flow" state (Csikszentmihalyi, 1990). Engagement is believed to improve power, devotion and commitment (Schaufeli et

al., 2006). Engagement is also an important component of successful aging (Rowe and Kahn, 1987).

R: Relationships: Is the third contributing factor in the PERMA well-being model. According to Butler and Kern (2016), as humans we are "social beings" and good relationships form the essence of our well-being. People who have meaningful and positive relationships with others are happier than those who do not have. Forgeard et al. (2011) claim that relationships are important because people want to be loved and appreciated. Social relationships have positive effects on health and individuals' well-being (Tay et al., 2012). For example, social support has been associated with better physical health, longer life, and healthier behaviors (Tay et al., 2012; Taylor, 2011).

M: Meaning: Meaning is the fourth contributor within the PERMA well-being model. The sense of meaning is defined as defining the direction of life, connecting with something higher than oneself, feeling that one's life is valuable and important and believing that there is a purpose in someone's life actions (Steger, 2012; Steger et al., 2008a). Meaning is about focusing on something bigger than ourselves or serving for a purpose. It is the desire of a person to believe that he/she is living or working for a greater purpose (Butler and Kern, 2016). Meaning gives the person the feeling that life is important. It was found to be associated with better physical health, lower mortality risk and higher life satisfaction, joy in life, self-fulfillment, and the feeling from being able to fulfill what is lacking in different domain (Ryff et al., 2004; Steger et al., 2008b; Boyle et al., 2009; Steger, 2012).

A: Accomplishment: The accomplishment factor in the PERMA well-being model is a driving force for accomplishing or achieving personal goals (Seligman, 2011). The effort to reach the goals of completing the tasks, involves the capability of competence and efficiency. In fact, self-determination theory shows that competence is a basic human need (Ryan and Deci, 2000). It has been shown that struggling to achieve success is related to subjective well-being (Coffey et al., 2014; Seligman, 2011).

The PERMA well-being model has a multi-dimensional structure as mentioned earlier and its measurement is very difficult. According to Seligman (2011), to measure the multidimensional structure of the PERMA well-being model, each dimension must be measured separately and therefore it should not be measured with a single scale. Scales in positive psychology focus on topics that include flow or intense concentration, devotion and poring (Csikszentmihalyi, 1990). National surveys tend to focus on objective achievement indicators, while for Butler and Kern (2016) most of the existing well-being scales are related to competence, mastery or effectiveness. Those who want to investigate happiness and well-being need appropriate scales. Well-established measurement tools help us to develop our theories and well-being

Table 1. The language validity table of the scale.

Scale	Sub-scale	Gender	%	\bar{X}	SS	r	p
PERMA Well-being scale	Turkish version	Male	26.2	22.84	1.72	0.95	0.000
	English form	Female	73.8			0.95	

understanding. Subjective perspectives can be complemented by objective scales. Moreover, appropriate scales are also needed to assess the effectiveness of the increasing number of applications to improve well-being. One-dimensional scales, such as life-satisfaction, a concept similar to well-being, are highly influenced by the mental state of the individual and ignore other aspects of well-being (Huppert and So, 2013). A number of scales have been used to measure well-being and happiness. Mostly used scales such as development scale (Huppert and So, 2013), satisfaction scales (Diener et al., 2012), development items (Huppert and So, 2013), short inventory of development (Su et al., 2014) and psychological well-being scales (Ryff, 2014) have been tested and used in various examples and applications. The 54-item Comprehensive Development Inventory (Su et al., 2014), which measures the five-dimensional structure of PERMA theory, includes both components of the PERMA well-being model and a number of other domains (e.g. learning, self-esteem, lack of autonomy, optimism).

There are no short valid instruments that can specifically measure the five-dimensional Seligman theory (2010), which is relatively new in Turkey. Until today, no studies have been found in Turkey in order to use Seligman's PERMA well-being model in experimental and other researches. The aim of this study is to investigate whether the structures of the PERMA well-being model can be measured as separate dimensions in the Turkish culture using the materials of well-being assessments obtained from university students and thus to investigate and apply the PERMA well-being theory in Turkey.

METHODOLOGY

Study I

The necessary permissions for the adaptation of the scale to the Turkish language were taken from Butler and Kern (2016). In the following period, the scale was translated into Turkish by four academicians who were experts in the field and are also proficient in English language. In addition, in order to assess whether there is a problem in the Turkish language, support was obtained from a specialist academician. At the last stage, two academicians who are experts in the field reached an agreed decision on the final form of the Turkish form.

It was announced to the students of Konya Necmettin Erbakan University Ahmet Keleşoğlu, Faculty of Education, Department of Foreign Languages, English Language Teacher Education Department that there will be an adapted well-being scale. In

particular, they indicated the need for English-speaking students to measure the language equivalence of the scale, and two groups of voluntary students were created for implementation. The first group consisted of 84 students (73.8% female, 26.2% male, $X = 22.84$ years, $Ss = 1.72$) (Table 1).

The second group was reapplied to the same students after four weeks. According to the findings obtained from the first group for language equivalence, there was a high positive correlation between the scale's original English form and the Turkish version ($r = 0.95$, $p < 0.000$). According to the findings obtained from the second group for language equivalence, a high positive correlation was found between the scale form and the original English form ($r = 0.95$, $p < 0.000$). According to the results obtained from these two groups, it can be said that the Turkish form of the scale is equivalent to the original English form.

Study II

Confirmatory factor analysis (CFA) was performed to determine the construct validity of the PERMA well-being scale. Observed variables (23) and 250 participants were included in this study. It was seen that there are 23 free parametric estimations in this study and that 272 participants are pointing out to a sufficient sample for confirmatory factor analysis. Considering that the study was carried out with 250 participants, it seems to meet the minimum criterion. Confirmatory factor analysis was conducted to reveal the structure of the PERMA well-being scale and confirm that the explained original form was verified in the Turkish sample. In order to obtain evidence on the validity of the PERMA well-being scale, a 5-factor structure of the 23-item scale was administered to the first-level confirmatory factor analysis. Using the Robust Maximum Likelihood method, χ^2/sd , RMSEA, CFI, GFI and NNFI values were calculated as a measure of the model's goodness of fit and the following conditions are taken into consideration in order to be able to accept that the model is adhering to the adequate/acceptable level: $\chi^2/sd \leq 5$ (Kline, 2005; Sümer, 2000), $RMSEA \leq 0.08$ (Browne and Cudeck, 1993; Byrne and Campbell, 1999; Thompson, 2000; McDonald and Moon-Ho, 2002; Schermelleh-Engel et al., 2003; Jöreskog and Sörbom, 1993), $CFI \geq 0.90$ (Sümer, 2000; Bentler, 1980), $GFI > 0.90$ (Hooper et al., 2008; Bentler and Bonett, 1980;) and $NNFI \geq 0.90$ (Sümer, 2000; Marsh et al., 2006). The compliance level of the 23-item Turkish form of the model described for the original well-being scale was tested. According to the obtained results as $\chi^2/sd = 100.96/41$, $p = 0.00$, $RMSEA = 0.076$, $CFI = 0.96$, $GFI = 0.93$, $NNFI = 0.94$; the relationship between the implicit variable (factor) and the observed variables and the error variances of the observed variables for the 23 item PERMA well-being scale are presented in Figure 1.

As shown in Figure 1, the fit indices of the four-dimensional student commitment scale consisting of 23 items and 5 sub-factors are found as follows ($\chi^2/sd = 100.96/41$, $p = 0.00$). The values for the fit indices are found as $RMSEA = 0.076$, $CFI = 0.96$, $GFI = 0.93$, $NNFI = 0.94$.

Study III

The criterion-related validity of the PERMA well-being scale was

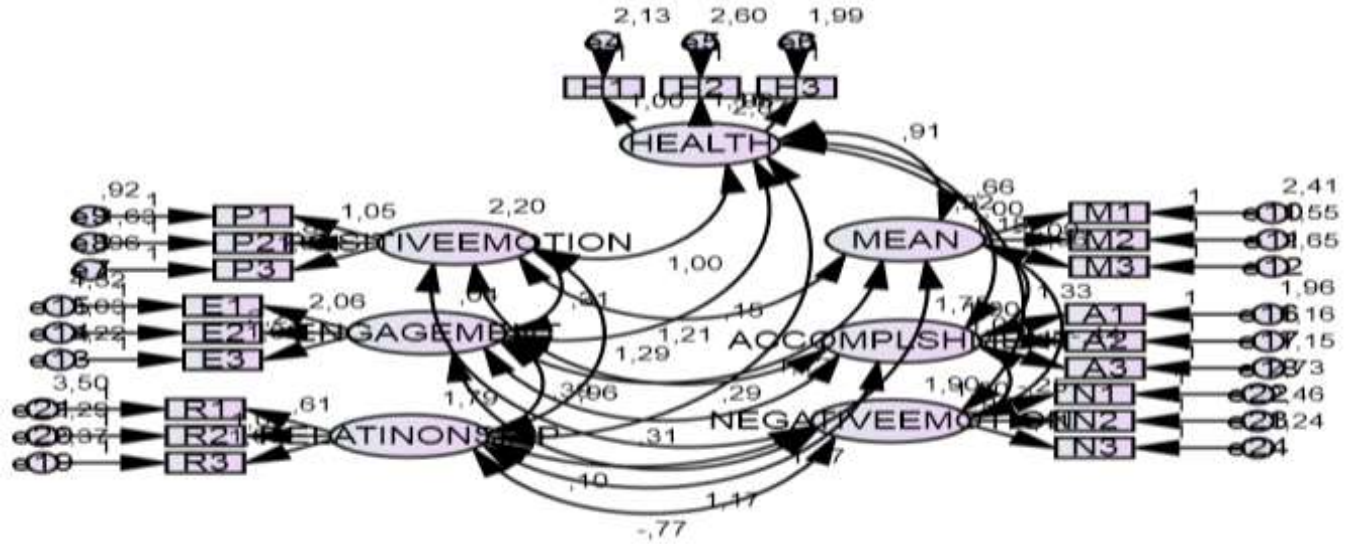


Figure 1. Confirmatory factor analysis of PERMA well-being scale

Table 2. Similarity scale validity table of Subjective well-being scale and psychological well-being scale of PERMA well-being scale.

Scale		Subjective well-being scale	psychological well-being scale
PERMA Well-being scale	r	0.449	0.519
	p	0.004	0.001

tested with 272 students from Education Faculty of Konya Necmettin Erbakan University, Ereğli (Table 2).

As a result of the correlation analyses made in order to determine the criterion related PERMA well-being scale; the student's scores from the PERMA well-being scale showed a positive, significant and moderate ($r=0.449$, $p<0.004$) relation with the subjective well-being scale and also a positive, significant and moderate ($r=0.519$, $p<0.001$) relation with the psychological well-being scale. The subjective well-being scale developed by Tuzgöl Erdost (2005) and the psychological well-being scale developed by Diener et al. (2009) and adapted to Turkish by Telef (2013), were used to test the criterion-related validity of the PERMA well-being scale

Data collection tools

PERMA well-being scale

PERMA Measurement Instrument: The PERMA scale developed by Butler and Kern (2015, 2016) aims to measure the conceptualization of Martin Seligman's five dimensions of well-being (positive emotions, engagement, positive relationships, meaning and accomplishment). The scale consists of 15 items, 3 items in each dimension. Butler and Kern (2015, 2016) added 8 items to the scale in addition to the existing ones. When the total well-being score is calculated, 15 items and the well-being item are evaluated together. Apart from these, there are 7 filling materials on the scale. Three of these items measure the feeling of being healthy, 3 of them measure negative feelings, 1 for general well-being and 1 of them loneliness. Although the PERMA Measurement Instrument consists of 15 items, the authors who develop the scale

suggest that the 23-item form should be used because of the important information provided by the additional items. In addition, negative emotions and loneliness items are used to prevent the incentives that participants may have due to constantly responding to positive items.

Scoring and Evaluation of the Scale: The PERMA scale consists of 15 items and 8 filling items with a total of 23 items which measure the components of the well-being model. The 7, 12, 14, and 20 items of the filling material are reverse coded. The scale consists of 15 items, 3 items in each dimension. The scores of sub-dimensions are calculated by taking the average of 3 items in the related sub-dimension: P Positive emotions: $(p5+p10+p22)/3$, E Engagement: $(p3+p11+p21)/3$, R Relations: $(p6+p15+p19)/3$, M Meaning: $(p1+p9+p17)/3$, and A Accomplishment: $(p2+p8+p16)/3$. Butler and Kern (2016) added 6 of the 8 filling items to the scale as two separate dimensions: H Health: $(p4+p13+p18)/3$, N Negative emotions: $(p7+p14+p20)/3$. Butler and Kern (2015, 2016) suggested adding happiness (p23) to the total of 15 items to determine the total well-being score. PERMA: $(p5+p10+p22+p3+p11+p21+p6+p15+p19+p2+p8+p16+p23)/16$. The last remaining item measures loneliness: L Loneliness: p12. Butler and Kern (2016) recommended the application of the measurement instrument with its 23-item form. The use of the filling items may be useful in individual and group counseling practice.

Subjective well-being scale

The Subjective Well-Being Scale (ÖİÖ) was developed by Tuzgöl Erdost (2005). It is a Likert type measure of 46 items. There are personal judgments about life spaces and positive and negative

emotions included in this scale. The structural validity of the ÖÖ was determined by the principal component analysis. The upper and lower 27% score group averages were compared with the t test and a significant difference were found between the groups. Similar scale validation studies showed a significant relationship between the ÖÖ scale and the Beck Depression Inventory (BDI) ($r = 0.70$). The Cronbach alpha reliability coefficient of the scale was 0.93 and the test-retest reliability coefficient was found to be $r = 0.86$. As a result of the analyses, it was decided that ÖÖ is a valid and reliable tool for determining the 'subjective well-being' levels of university students.

Psychological well-being scale

The Psychological Well-Being Scale was developed by Diener et al. (2009) and adapted to Turkish by Telef (2013). As a result of the exploratory factor analysis for the Psychological Well-Being Scale, a single factor structure that accounts for 30% of the total variance was obtained. The internal consistency coefficient of the Psychological Well-Being Scale was found as 0.87. Scores are calculated for both the sub-dimensions and the generalized scale. The high scores obtained from the scale are evaluated as having a high level of belonging. The high scores indicate that the person has many psychological resources and powers. As a result of the validity study conducted with university students, it was determined that the scale consists of a single factor and 53% of the total explained variance. The factor loads of the scale items vary between 0.61 and 0.77. Although the scale does not provide individual measures of psychological well-being aspects, it gives us a general overview of positive functions in different areas that we believe are important (Diener et al., 2010).

Study IV: Method

Reliability study group

The reliability studies of PERMA Well-being Scale were carried out on 152 students studying at the Education Faculty of Necmettin Erbakan University, Ereğli. For the reliability of the Turkish form of the PERMA Well-being Scale, internal consistency, two-half reliability and test-retest procedure were performed. The PERMA Well-being Scale was applied to university students twice in two weeks (Table 3).

The reliability coefficients of the PERMA Well-being Scale were found as $\alpha = 0.81$. The Cronbach alpha coefficients of the Turkish form of the scale vary between 0.62 and 0.82. Accordingly, the Cronbach alpha internal consistency coefficients for each sub-scale are as follows: Positive Emotion $\alpha = 0.77$, Engagement $\alpha = 0.62$, Relationship $\alpha = 0.70$, Meaning $\alpha = 0.82$, Accomplishment $\alpha = 0.70$, Negative Emotion $\alpha = 0.65$, Health $\alpha = 0.83$. The internal consistency coefficient for the entire scale was $\alpha = 0.82$.

DISCUSSION

The purpose of this study was to adapt the PERMA Well-being Scale developed by Butler and Kern (2016) to Turkish and to examine the psychometric characteristic on university students. The PERMA Well-being Scale consists of five dimensions: P: Positive and negative emotions, E: Engagement, R: Relationships, M: Meaning, and A: Accomplishment. The high scores obtained from the scale indicate that the well-being level of the

individual is high. In line with this aim, the scale was first translated into Turkish from its original form. After this step, a confirmatory factor analysis was performed to establish the validity of the scale. The fit index values of the scale are in a range of scores accepted in most studies in the field of statistics (Brown and Cudeck, 1993; Byrne and Campbell, 1999; Thompson, 2000; McDonald and Moon-Ho, 2002; Schermelleh-Engel et al., 2003; Bentler and Bonett, 1980; Bentler, 1980; Marsh et al., 2006).

The scale was found similar to the five dimensions obtained by Butler and Kern (2016). For this reason, the subscale names of the original scale were used also for naming the subscales in the Turkish form of the scale. Within the scope of validity studies of the scale, similar scale validity methods were used. For this purpose, the relations between the PERMA well-being scale, subjective well-being scale, and the psychological well-being scale were examined. The scores of the PERMA well-being scale showed positive, significant and moderate relations with the subjective well-being scale and also positive, significant and moderate relations with the psychological well-being scale.

The reliability coefficients of the PERMA well-being scale were found at $r = 0.81$. The Cronbach alpha coefficients of the Turkish form of the scale vary between 0.62 and 0.82. Therefore, the Cronbach alpha internal consistency coefficients for each subscale are as follows: Positive Emotion $\alpha = 0.77$, Engagement $\alpha = 0.62$, Relationship $\alpha = 0.70$, Meaning $\alpha = 0.82$, Accomplishment $\alpha = 0.70$, Negative Emotion $\alpha = 0.65$ and Health $\alpha = 0.83$. The internal consistency coefficient for the entire scale was $\alpha = 0.82$. The reliability values from the scale originally developed by Butler and Kern (2016) also vary between 0.72 and 0.85. All these results can be evaluated as evidence that the PERMA well-being scale is a valid and reliable measurement tool for the Turkish sample. Butler and Kern (2016) also found similar reliability results in the original scale.

In light of all these findings and evaluations, it appears there is sufficient evidence that the 23-item Turkish form of the well-being scale can measure the patience of the individuals on seven basic dimensions. In other words, the structures of Positive Emotion, Engagement, Meaning, Accomplishment, Negative Emotion, and Health, which are aimed to be measured by the Turkish form theoretically and the total dimensions of the PERMA models can be measured in a valid way. As a result, the scale has been prepared for use in studies which aim to examine the well-being levels of individuals. The scale can examine the relations between the patience levels and other variables of university students who will be used for this study and can find answers to many other questions.

The sample of research consisted of university students. This is among the limitations of the research. In future researches, studies can be done on different

Table 3. Table showing the sub-dimensions and total reliability of the scale.

Scale	PERMA well-being scale	Positive emotion	Engagement	Relationship	Meaning	Accomplishment	Negative Emotion	Health
α	0.81	0.77	0.62	0.70	0.82	0.70	0.65	0.83

sample groups of the PERMA scale. It can also focus on positive constructs such as hope, optimism, and negative constructs such as depression, anxiety, and fear.

CONFLICT OF INTERESTS

The author has not declared any conflict of interests.

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