Investigation of the Psychometric Properties of the Turkish Adaptation of Positivity Scale for Adolescents and Young Adults

Pozitiflik Ölçeğinin Türkçe Uyarlamasının Ergenler ve Genç Yetişkinler İçin Psikometrik Özelliklerinin Sınanması

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ABSTRACT

Positive orientation or positive thinking, is one of the main subjects studied in positive psychology. Thus, the main purpose of the present study was to investigate the validity and reliability of the Turkish version of the Positivity Scale (P Scale) for adolescents and young adults. The participants were 307 high school students (Female = 189, Male = 118) with a mean age of 15.84 years, and 354 college students (Female =190, Male =164) with a mean age of 21.36 years. A multi-group confirmatory factor analysis was employed to evaluate the construct validity of the P Scale, and the measurement invariance of the Turkish version of the scale was analyzed. The Rosenberg Self-esteem Scale, the Life Orientation Test, the Positive and Negative Affect Scale for Adolescents and the Satisfaction with Life Scale were used to provide further evidence for the construct validity of the scale. For internal reliability of the scale, Cronbach alpha level was computed. Findings of the Confirmatory Factor Analysis (CFA) confirmed the unidimensional structure of the scale. Measurement invariance across groups showed that both configural and metric models provided acceptable fits to the data. Moreover, there were significant correlations between positivity and self-esteem, optimism, pessimism, life-satisfaction, positive and negative affect. The scale also had a satisfactory internal consistency coefficient. The findings of the present study suggest that the Turkish adaptation of the Positivity Scale can be confidently used with Turkish adolescents and young adults.

Keywords: Positivity, well-being, scale adaptation, adolescents, young adults

ÖZ

Olumlu yönelim veya olumlu düşünme pozitif psikolojinin temel çalışma konuları arasında yer almaktadır. Bu nedenle bu çalışmada esas olarak, Pozitiflik Ölçeğinin (P Ölçeği) Türkçe uyarlamasının ergenler ve genç yetişkinler için psikometrik özelliklerinin incelenmesi amaçlanmıştır. Araştırmanın katılımcıları 307 lise (Kadın = 189, Erkek = 118) ve 354 üniversite öğrencisinden (Kadın = 190, Erkek = 164) oluşmaktadır. Lise grubunun yaş ortalaması 15.84 ve üniversite grubunun yaş ortalaması 21.36'dır. Ölçeğin Türkçe uyarlamasının yapı geçerliliğini ve ölçüm değişmezliğini belirlemek amacıyla çoklu grup doğrulayıcı faktör analizinden yararlanılmıştır. Yapı geçerliliğine dair daha fazla destek sunmak amacıyla Rosenberg Benlik Saygısı Ölçeği, Yaşam Yönelimi Testi, Ergenler İçin Olumlu ve Olumsuz Duygular Ölçeği ve Yaşam Doyumu Ölçeği kullanılmıştır. Ölçeğin güvenirliğini test etmek amacıyla ölçeğin Cronbach Alpha katsayısı hesaplanmıştır. Doğrulayıcı faktör analizi bulguları ölçeğin tek boyutlu yapısını destekler niteliktedir. Gruplar arası ölçüm değişmezliğine yönelik yapılan analizler hem yapısal modelin hem de ölçüm modelinin kabul edilebilir uyum değerlerine sahip olduğunu göstermiştir. Bu bulgulara ek olarak olumlu düşünme ile benlik saygısı, iyimserlik, kötümserlik, yaşam doyumu ve olumlu ve olumsuz duygular arasında elde edilen anlamlı korelasyon değerleri ölçeğin yapı geçerliliğini destekler niteliktedir. Ölçeğin ayrıca yeter düzeyde iç tutarlılığa sahip olduğu bulunmuştur. Analizlerden elde edilen bulgular, P Ölçeğinin Türk ergenlerle ve genç yetişkinlerle güvenle kullanılabileceğini göstermektedir.

Anahtar Kelimeler: Pozitif olma, iyi-oluş, ölçek uyarlama, ergenler, genç yetişkinler

Philosophers throughout the history of mankind have considered happiness the perfect motivator and the highest level of well-being for human beings (Diener, 2009; Diener, 2009a). Nevertheless, Seligman (2007) claimed that abnormal behaviors and negative sides of mental health have been the center of attention since the emergence of psychology as a science. Supporting this claim, Diener (2009; Diener, 2009a) also stated that psychologists in general have ignored positive psychological well-being while extensively investigating people's unhappiness in general. According to Seligman (2007), the new face of psychology science must focus on factors that improve the current mental health state of individuals. In other words, psychology must pay attention to improve people's potential in order to foster well-being. In the last decade, both behavioral and social scientists have made a shift in their position, and thus, more theoretical and experimental studies have emerged rapidly (Diener, 2009; Diener, 2009a). Therefore, the main purpose of the study was to carry out the validity and reliability studies of the Positivity Scale (P Scale) for Turkish citizens.

Psychologists hold limited knowledge about how normal people can evolve under better conditions (Seligman & Csikszentmihalyi, 2000), because psychologists have the tendency to look at people in a negative and skeptical way (Sheldon & King, 2001). Psychology has evolved into a science to cure people since World War II. It has focused on treating human functions and disturbances in an illness model. Paying attention to psychopathology, the field of psychology neglected the development of the individual and society. The purpose of positive psychology thus is shifting the focal point of psychology through not only improving adverse consequences a person faces, but also building positive qualities s/he possesses (Seligman & Csikszentmihalyi, 2000). It was also asserted that positive psychology encourages psychologists to consider human potentials, motives and capacities in a more open-minded and appreciative manner. Positive psychology takes the strengths and virtues of a normal person into account (Sheldon & King, 2001).

The positive psychology field deals with relevant subjective experiences such as well-being, fulfillment and satisfaction in the past, optimism and hope for the future, and flow and happiness in the moment at a subjective level. There are positive qualities such as capacity for love, vocation, courage, perseverance, forgiveness, spirituality and wisdom at the individual level (Seligman & Csikszentmihalyi, 2000). One of the concepts studied in the positive psychology field is "positivity" as a personal tendency. The concept of positivity first appeared as "positive thinking" (Caprara & Steca, 2005; Caprara et

al., 2006), and later as "positive orientation" (Alessandri et al., 2012; Caprara et al., 2010) or "positivity" in studies in the related literature. Positivity or positive orientation, defined as "a quite pervasive mode of viewing and facing reality that affects the ways people evaluate their subjective experiences," (Caprara et al., 2012, p. 702) was acknowledged as a common and latent factor in three vital concepts in positive psychology; life-satisfaction, optimism and self-esteem (Caprara et al., 2009; Caprara et al., 2012).

Whereas depression is about holding a negative perception toward oneself, life, and the future, a positive perception is a fundamental component of feeling good about oneself, life and future (Caprara et al., 2006). According to Caprara et al. (2009), definite personality characteristics like self-esteem, optimism and life-satisfaction are the basic components of positive mental health status and well-being. These personality characteristics tend to be interrelated. According to some researchers (Alessandri et al., 2012; Caprara et al., 2009; Caprara et al., 2011; Caprara & Steca, 2005), positive thinking or positive orientation or positivity corresponds to a latent dimension in life-satisfaction, optimism and self-esteem that are affected by one's cognition, feeling and actions. Regarding this conceptualization, it can be stated that self-esteem is one's evaluations about himself/herself, life-satisfaction is one's evaluations about life, and lastly, optimism is one's evaluations about the future .

It was claimed that the reasoning underlying positivity as disposition was built upon Aaron Beck's (1967; cited in Caprara et al., 2017) claims about beliefs about oneself, the world and the future which was called a cognitive triad. In this perspective, when these beliefs are negative, one tends to be depressed. Yet, Caprara et al. (2009) provided findings about the genetic basis of positive thinking by studying twins . Thus, Caprara et al. (2012) developed a scale to assess positive orientation. Cross-cultural validation of the Positivity Scale (P Scale) was investigated in five countries in Europe: Italy, Poland, Serbia, Germany and Spain (Heikamp et al., 2014). Validity and reliability studies of the P Scale for a Brazilian sample were also carried out (Borsa, Damásio & Koller, 2016). All these adaptation studies attest that positive thinking as an orientation can be measured in another culture.

The adaptation of the Positivity Scale into Turkish was performed before by Çıkrıkçı et al. (2015). This adaptation study, however, has some limitations. The validity and reliability studies were carried out with only adolescents . Moreover, they reported three modifi-

cations for five items in Confirmatory Factor Analysis (CFA) ; however, they did not provide goodness of fit indices before these modifications. Thus, it remains unclear about the contribution of these modifications to the improvement of the goodness of fit indices. Therefore, three modifications for five items in a scale with eight items excite questions regarding the validity of the factor structure of the scale. The authors would have provided exploratory factor analysis to provide additional support for the factor structure of the Turkish version of the P Scale. Even though the authors provided statistical support for language equivalency of the scale, some items on the Turkish version of the scale also seem problematic, especially items eight and five. Item eight (I generally feel confident in myself) was not translated correctly (Kendimi genellikle güvende hissediyorum). Item five (On the whole, I am satisfied with myself) was translated into Turkish as "Bir bütün olarak benliğimden memnunum". The word "benlik" for "myself" does not seem to have the exact meaning. Furthermore, the word "benlik" may not be understood well by lay people since it is an abstract word and unclear psychological construct.

There are some instruments that measure positive aspects in adolescents such as hope (Atik & Kemer, 2009), self-esteem (Çuhadaroğlu, 1986), quality of life (Memik et al., 2007), life orientation (Aydın & Tezer, 1991) and happiness (Doğan et al., 2011) in Turkey. There is also an adapted version of the Positivity Scale, though , it has some limitations (mentioned above). Therefore, the main objective of this study is to carry out the adaptation studies of the Positivity Scale to Turkish for adolescents and young adults. To that end, we sought to provide evidence for the construct validity of the scale by employing confirmatory factor analysis, multiple-group confirmatory factor analysis (Multiple-group CFA). Cronbach alpha coefficient was computed to present evidence for internal reliability.

METHOD

Participants

There were two groups of participants in the current study. The first group was composed of high school students from three state high schools representing three different socio-economic levels in a small-sized city in Turkey. The second group consisted of college students from different grades in a state university located in southeastern Turkey. The High school group consisted of 307 students with an age range of 14-19 years *(M= 15.84, SD= 1.21)*, 189 of whom were female (61.6%) and 118 male (38.4%). Of

the high school participants, 77 of them were 9th graders (25.1%), 59 of them were 10th graders (19.2%), 103 of them were 11th graders (33.6%) and 68 of them were 12th graders (22.1%). The college group consisted of 354 students with an age range of 18-39 years *(M= 21.36, SD= 1.98)*, 190 of whom were female (53.7%), and 164 male (46.3%). Of the college participants, 132 of them were sophomore (37.3%), 96 of them were junior (27.1%), and 126 of them were senior (35.6%) students. Moreover, an additional construct validity study was carried out with 98 high school students and 96 college students. The convenient sampling method was used to gather the participants. This is a sampling method that allows researchers to reach participants of a specific study easily (Cohen, Manion, & Morrison, 2007).

Instruments

The Positivity Scale (P Scale): The Positivity Scale was originally developed by Caprara et al. (2012). The scale was designed to measure positivity as a disposition with eight items. They first generated 36 items reflecting a person's positive views regarding self, life and the future, as well as his/her confidence in others, through investigating existing instruments for each dimension. Having discarded 10 items, analyses were performed on 26 items. The items are answered on a five-point Likert scale ranging from 1 ("Strongly Disagree") to 5 ("Strongly Agree"). The exploratory factor analysis yielded eight items with a unidimensional construct for the adult sample. Factor loadings varied between .43 and .68. Confirmatory factor analysis supported single factor structure of the scale with eight-item [χ^2(19, N= 322) =41.22, *p*<.01; CFI= .96; RMSEA= .065, 95% CI (.059, 077); SRMR= .046], and a one-factor model solution was confirmed by the validation study [χ^2 (19, N= 457) = 52.99, *p*<.01; CFI= .96; RMSEA= .063, 95% CI (.043, 083); SRMR= .043]. They also investigated the metric invariance and scalar invariance of the P scale and their findings indicated that the factor loadings of eight items did not differ regarding gender (Caprara et al., 2012). (Items of the P Scale are provided in Appendix A, since they were published by the authors of the original study).

The Life Orientation Test (LOT): The scale was originally developed by Scheier and Carver (1987) to measure optimism, and it was adapted to Turkish by Aydın and Tezer (1991). It is a self-report scale with eight-items, including four filler items. It is answered on a 5-point Likert-type scale ranging from 0 "Strongly Disagree" to 4 "Strongly Agree". Four items are worded positively, while other four items are worded negatively. The total score is obtained as reversing the scores of the negatively worded

items. The total scores range between 0 and 32. The higher the score is, the higher the optimism is. The test-retest reliability of the scale was found to be .77. The correlation coefficient between the scale and Beck Depression Scale was found to be -.56 and -.45 at two different groups and time (Aydın & Tezer, 1991). The internal consistency coefficient of the LOT in the current study was found to be .79 for the high school group and .72 for the college group.

The Satisfaction with Life Scale (SWLS): The scale was developed to assess one's satisfaction with life as a whole by Diener, Emmons, Larson and Griffin (1985). Adaptation studies of the scale to Turkish were performed by Köker (1991). It has five items answered on a seven-point Likert Type scale ranging from 1 ("Strongly Disagree") to 7 ("Strongly Agree"). The total score varies between five and 35. A higher score indicates a high level of satisfaction. Diener et al. (1985) reported that the internal consistency of the scale was .87, and the test-retest reliability was .82. In the adaptation study, the test-retest reliability was found to be .85, and item-test correlations varied between .71 and .80. In another study (Durak, Şenol-Durak, & Gençöz, 2010), the single factor structure of the scale was confirmed in three different populations in Turkey along with the concurrent validity . Cronbach alpha values in the current study were .81 for the high school group, and .78 for the college group.

The Positive and Negative Affect Scale for Adolescents (PANAS-A): The Positive and Negative Affect Scale for Children (PANAS-C) was originally developed by Laurent et al. (1999), and adapted to Turkish by Yıldız (2014). The original scale has 27 items answered on a five-point Likert-type scale ranging from 1 ("Not at all") to 5 ("Extremely"). There are 14 items, half of which indicate positive affect, and another half indicates negative affect (Yıldız, 2014). Internal consistency coefficients of the positive affect dimension were found to be .91 for the high school group, and .92 for the college group. The Pearson correlation coefficient was computed for two groups and it was found to be .89 and .91 for positive affect, and .79 for negative affect. The composite reliability was found to be .89 and .91 for positive affect, and .79 for negative affect. Yıldız (2014) also reported values of average variance explained to be .71 and .76 for positive affect, and .46 for negative affect. Test-retest reliability obtained from 63 high school students in a three-week interval was found to be .70 for positive affect, and .63 for negative affect. Cronbach alpha values for the negative affect dimension were .80 for the high school group and .79 for the college group in this study.

The Rosenberg Self-esteem Scale (RSES): The RSES was originally developed by Rosenberg (1965) and has been widely used to assess global self-esteem. It has 10 items answered on a four-point Likert type scale ranging from one ("Not very true of me") to four ("Very true of me"). Previous studies have reported alpha reliabilities for the RSES ranging from .88 to .90 across the six assessments (Robins et al., 2001). Half of the items are positively worded and the other negatively worded. Although there is some evidence regarding multidimensionality of the RSES (Ang et al., 2006; Tafarodi & Milne, 2002), it has been widely used as a unidimensional instrument. A psychometric property of the scale for Turkish was developed by Çuhadaroğlu (1986). Test-retest reliability was found to be .71, and Cronbach's alpha reliability to be .75 for the Turkish version. The internal consistency coefficient of the scale in the current study was found to be .83 for the high school group and .84 for the college group.

Procedure

After getting permission from Prof. Dr. G. V. Caprara to perform adaptation studies of the Positivity Scale to Turkish in April 2013, the adaptation study began by translation of the scale. In translation studies, the single translation method was preferred to the translation-back translation method, due to some concerns about back translation (Douglas & Craig, 2007) and some benefits of single translation (Kılıçer & Odabaşı, 2010). The main reason for choosing the single translation method was that translation equivalence was evaluated according to the target language (Turkish) in this method. Thus, in accordance with agreements in the evaluations of language experts, statements can be organized according to the target language and an appropriate statement structure regarding the original language can be adapted to the target language. Two scholars of counselor education and three English Language Teaching (ELT) instructors translated the scale to Turkish. The translation equivalence was established by the judgmental method (Hambleton & Bollwark, 1991), and thus, the authors of this study and two ELT instructors worked together on the translations. The translations were evaluated regarding sentence structure, word choices, meaning and phrases in line with the Turkish language. A final translation form was generated by these experts, and the final touch was done by an instructor of Turkish literature.

Prior to the implementation of the study, legal approval was received from the ethics committee of the university for the college group, and the local Board of National Education for the adolescent group. Parental informed consent forms were asked for the

high school participants. The authors also verbally informed high school participants regarding the nature of the study, along with the procedures to process the research data. Researchers further provided the information on the instructions of the data collection tools before asking for participation. Data were gathered from the adolescents who provided informed consent, and parental consent. They responded anonymously to the instruments on a voluntary basis.

Data Analysis

The factor structure of the P Scale was examined by CFA. To evidence the measurement invariance of the scale for high school and college students, multiple-group CFA was also performed. The maximum likelihood method was chosen for model estimation. Cross-validation of the Turkish version of P Scale was tested by using configural invariance and metric invariance methods. Further construct validity of the P Scale was also examined by computing correlations between the P Scale, and the LOT, RSES, SWLS, PANAS-A. Internal reliability of the scale was also examined by computing Cronbach's Alpha coefficients. The significance level was set at .05 p-value. Statistical analyses were conducted by using SPSS 20.0 and LISREL 8.80 software programs.

RESULTS

Multiple-group CFA was performed in order to investigate measurement invariance of the P Scale for both high school and college groups. Results of multiple-group CFA for measurement invariance of the scale and model fit indices are given in Table 1.

**Table 1.** Measurement Invariance Results and Goodness of Fit Indices

Model Tests	Model Goodness of Fit Indices				Model Difference		
	χ^2	df	RMSEA[a]	CFI	$\Delta\chi^2$	Δdf^b	ΔCFI
Groups							
High School	75.89	20	.096 (.073-.12)	.95			
College	74.61	20	.107 (.082-.13)	.94			
Configural invariance	150.50	40	.101 (.084-.12)	.95	-	-	-
Metric invariance	174.49	48	.099 (.083-.11)	.95	23.99	8 (26.12)	0

[a]RMSEA values within 90% confidence interval are given in the bracket.
[b] Critical χ^2 values regarding Δdf are given in the brackets.

Before performing analyses for measurement invariance of the P Scale, a CFA was performed separately for each group. CFA analysis for each group yielded acceptable model fit indices. Consequently, configural invariance analysis was performed to find

evidence for measurement invariance in which all the parameters were set free. Analysis yielded acceptable fit indices; χ^2=150.50, df= 40, RMSEA= .101 (90% CI= .084-.12), SRMR = .06, CFI= .95. As a result, configural invariance was obtained between two groups. Aftermath, metric invariance of the P Scale was analyzed to determine whether factor loadings were same for both groups, and it yielded satisfactory good fit indices; χ^2=174.49, df= 48, RMSEA= .099 (90% CI=.083-.11), SRMR = .06, CFI= .95. This finding proves that factor structure of the scale is identical for both groups. The results of the test of the difference between configural invariance and metric invariance models yielded ΔCFI=.00 and RMSEA=.10 which proved that the model did not get worse significantly. Finally, the values obtained by the Chi-square test of difference (χ^2=23.99, 8: p> .05) proved that significance level confirmed that factor structure and pattern were equal at configural invariance level, and factor loadings were also equal at metric invariance level between the two groups (Figure 1).

Chi-Square=174.49, df=48, P-value=0.00000, RMSEA=0.099
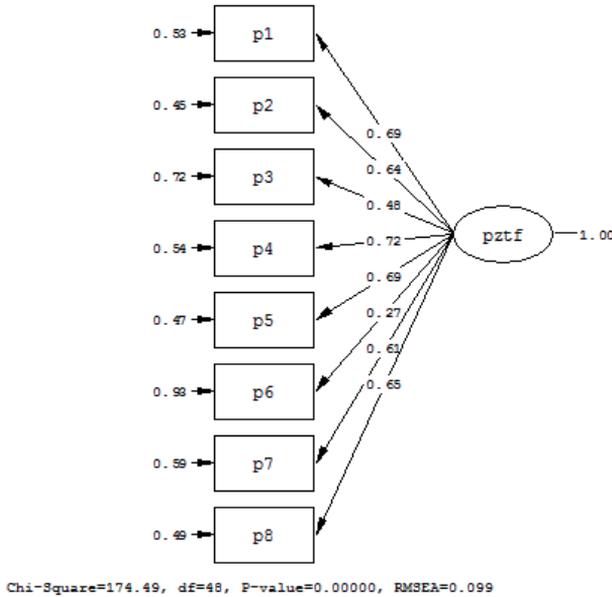
Figure 1. Path Diagram of the P Scale

T- values of the items of P Scale, regression weights (factor loadings) and multiple correlation squares (R^2) as a result of configural invariance were computed (Table 2). They confirmed that T- values of the items were significant and factor loadings of all items (excepting the sixth item) were within acceptable levels.

Table 2. Configural Invariance Factor Loadings, t Values and R^2 Values

Items	High School Group			College Group		
	t	λ	R^2	t	λ	R^2
1	11.70	.62	.42	12.91	.80	.58
2	10.40	.61	.34	11.75	.68	.51
3	9.22	.56	.28	6.30	.39	.18
4	13.16	.69	.50	12.35	.77	.54
5	13.78	.77	.53	10.45	.60	.42
6	4.27	.26	.07	4.11	.28	.08
7	11.81	.68	.42	8.64	.53	.31
8	12.09	.70	.44	10.05	.58	.40

We also provided additional evidence for the construct validity of the P Scale by examining the bivariate correlations between the scores obtained from P Scale and the scores from the LOT, the PANAS-A, the SWLS, and RSES (Table 3). Pearson Correlation Coefficients yielded significant positive correlations between positivity and optimism for both high school (hs) and college (col) groups [$r_{hs}(96, p< .01)= .43$, $r_{col}(94, p< .01)= .63$], positive affect [$r_{hs}(96, p< .01)= .55$, $r_{col}(94, p< .01)= .55$], life satisfaction [$r_{hs}(96, p< .01)= .60$, $r_{col}(94)= .73$], and self-esteem [$r_{hs}(96)= .62$, $r_{col}(94)= .54$], and negative correlation with pessimism [$r_{hs}(96, p< .01)= -.36$, $r_{col}(94, p< .01)= -.57$] and negative affect [$r_{hs}(96, p< .01)= -.47$, $r_{col}(94, p< .01)=-.40$].

Table 3. Correlations Between Positivity and Other Correlates of Well-Being

Variables	High School Group	College Group
Optimism	.43**	.63**
Pessimism	-.36**	-.57**
Life orientation total	.48**	.68**
Positive affect	.55**	.55**
Negative affect	-.47**	-.40**
Life satisfaction	.60**	.73**
Self-esteem	.62**	.54**

**p< .01, High School, N= 98, College N= 96,

Finally, we tested the internal validity of the P Scale by computing Cronbach alpha coefficients. Internal consistency coefficients were found to be as .81 for both high school and college groups.

DISCUSSION

The main purpose of the current study was to investigate the psychometric properties of the Positivity Scale (P Scale) developed by Caprara et al. (2012) to assess posi-

tive orientation of individuals in a high school and college sample in Turkey. To find out the factor structure of the P Scale, a Multiple-group CFA was performed, and a unidimensional structure of the scale was obtained, as was suggested in the original study for both groups.

Self-report measures have been commonly employed to explore different aspects of human behavior in social and behavioral sciences. To ensure the reliability of such measures, it is crucial to investigate whether the factor structure of a measure is the same for specified groups with different features. This is so called measurement invariance (van de Schoot, Lugtig, & Hox, 2012), sometimes called factorial invariance. An analysis of measurement invariance is crucial in scale development or adaptation studies. When measurement invariance is not obtained for a specified group, differences between specified groups cannot be explained and interpreted (Cheung & Rensvold, 2002). Analysis regarding measurement invariance confirmed that the factor structure of the P Scale was the same across both high school and college groups. Thus, cross validation of the scale was obtained. In the original study, Caprara et al. (2012) provided evidence for measurement invariance with the data gathered from different adult samples from four countries up to the partial scalar invariance. In the current study, researchers provided metric invariance between the high school sample and college samples. This study is the first study to investigate psychometric properties of the P Scale for high school students.

We also presented additional evidence for the construct validity of the P Scale by computing bivariate correlations between positivity, positive and negative affect, optimism, pessimism, life-satisfaction and self-esteem. Findings seem to be rather similar to those of Caprara et al. (2012). We have found significant positive correlations between positivity and optimism, life-satisfaction and self-esteem which are considered to be components of positivity. This finding confirmed the criterion validity of the scale. Additionally, internal validity of the scale was examined by computing internal consistency coefficients. Cronbach alpha values confirmed the internal validity of the Positivity Scale for both groups. Cronbach's alpha values over .70 indicate a high level of reliability of a given measure (Hair, Black, Babin, & Anderson, 2010; Pallant, 2011).

There are also other adaptation studies in different cultures. They have found similar findings supporting the results of the present study. In one of these studies, Heikamp et al. (2014) examined cross-cultural validity of the P Scale in five different countries: Ita-

ly, Germany, Spain, Poland and Serbia. The results of this study confirmed the unidimensional structure of the scale, like the present study. The researchers also provided the measurement invariance for the gender, convergent validity and cross-cultural validity of the scale. They have also found significant positive correlations between positivity and optimism, self-esteem, life-satisfaction, and negative correlations with depression. Souza, Araújo, Gouveia, Coelho, and Gouveia et al. (2014) in their adaptation study tested psychometric properties of the P Scale in a Brazilian sample. The unidimensional structure of the scale by this study was once more confirmed. They also showed the internal consistency coefficient of the scale to be .85, and composite reliability .65. The explained variance was also computed to be .60. Furthermore, they found significant positive correlations between positivity and life-satisfaction and vitality. Another adaptation study was performed in a Polish sample by Łaguna, Oleś and Filipiuk (2011). They tested the factorial structure of the P Scale and concluded that the Polish version of the scale was also unidimensional. They also provided evidence for internal validity of the scale on three different samples. Cronbach alpha values ranged from .77 to .84. Additionally, they tested test-retest validity of the P Scale and found *r=* .84 between two measures (Łaguna et al., 2011).

As mentioned in the introduction , there ha s been another adaptation study of the P Scale into Turkish (Çıkrıkçı, Çiftçi, & Gençdoğan, 2015). This study, however, has some limitations, stated previously. The current adaptation study has some advantages over the former study. First, the psychometric proofs for the P Scale for Turkish were tested both in a high school sample and a college sample. The former study consisted of only a college sample. Further, the former study only reported CFA with three modification indices for 5 items, and our findings regarding CFA yielded no modification. Thus, findings of the current study provided strong construct validity values. We also tested the measurement invariance of the P Scale to test the configural validity of the scale. We provided further construct validity for the P Scale by computing correlation coefficients between the scale and the LOT, the PANAS-A, the SWLS, and the RSES in which positivity as a personal tendency is considered to have a central role.

The current study also has some limitations. The sample of the study were high school and college students who were not diagnosed with a mental disorder. Further studies may include adolescents and young adults with a mental disorder. Further, the participants were selected from a single city which has a rather homogenous culture.

Therefore, including participants from different cities with different cultural features would have strengthened the generalizability of the findings. In the adaptation process of the scale, we did not use the back translation method due to some concerns discussed in the literature about this method. Specifically, that items on the back translation scale may not reflect and correspond to the true meaning in the original scale. This may be considered another limitation of the study. Finally, this instrument is a self-report instrument. Other sources such as parents and peers may also be used to gather data in supporting self-evaluations.

Goodness of fit indices of the study indicated acceptable values, however, our data revealed RMSEA values between .096 and .107 just within or higher than the cutoff point (.10). There are varying cutoff values for RMSEA in the literature. According to Hu and Bentler (1999), values lower than .06 indicate good fit. Browne and Cudeck (1989) suggested RMSEA values between .06-.08 as mediocre fit, and MacCallum, Browne and Sugawara (1996) accepted RMSEA values over .10 as poor fit. Some simulation studies (Kenny, Kaniskan, & McCoach, 2014, Taasoobshirazi & Wang, 2016), investigating the effect of sample size and degrees of freedom, suggest that RMSEA values tend to often falsely indicate poor fitting when the sample size is small and degree of freedom is low. Thus, it seems that the RMSEA values of the current study might have been influenced by relatively small sample size and degree of freedom.

Positivity as a personality construct, considered as a common foundation in self-esteem, optimism and life-satisfaction, offers several possibilities for future studies. There are previous studies that explore the associations between positivity and other constructs of positive psychology (Caprara, Eisenberg, & Alessandri, 2016; Caprara & Steca, 2005; Caprara et al., 2006; Caprara et al., 2010). However, further studies are needed to investigate possible links between positivity and other individual and social aspects to have a deeper understanding of this construct. Furthermore, there is a scarce number of studies that investigate the nature of positivity (Caprara & Steca, 2005; Caprara et al. 2009). We need new studies to explore inherent and learned aspects of positivity as personal orientation and to find out ways to improve this orientation starting from very early ages. There is also a limited number of cross-cultural studies (Caprara et al., 2010; Caprara et al., 2011). Thus, we need to carry on new cross-cultural studies to find out how it operates in different cultures especially western culture and eastern culture.

We have investigated the reliability and validity of the P Scale for Turkish in high school and college samples. The findings of the study suggest that the P Scale can be safely used with Turkish adolescents and young adults to measure positive orientation. There are some instruments that have been used in positive psychology in Turkey (Arslan, 2015; Atik & Kemer, 2009; Aydın & Tezer, 1991; Doğan, 2015; Doğan & Totan, 2013; Hisli-Şahin & Yeniçeri, 2015; Kapıkıran & Kapıkıran, 2010; Totan, 2015), however, there is no instrument up to date to assess positive orientation. Thus, it is believed that this new instrument is going to lead to new studies in the positive psychology field in Turkey. S chool counselors in Turkey may use the P scale to measure the level of positivity as an orientation in students, and they may work on developing ways to improve this quality in them. Considering the findings that asset to associations between positivity and aspects of mental health such as subjective well-being, life-satisfaction etc., it seems important to assess and improve positivity in individuals in their early years.

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