Psychometric properties of Turkish version of the Subjective Happiness Scale

Öznel Mutluluk Ölçeği Türkçe Versiyonu'nun psikometrik özellikleri

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Abstract

The Subjective Happiness Scale (SHS) is a scale developed to evaluate the global subjective happiness. The objective of this study is to examine the psychometric properties of the Turkish version of SHS in a community sample and undergraduate students. A total of 696 people (university group N= 348, Community group N= 222) have participated in the study. SHS, Oxford Happiness Questionnaire, Satisfaction with Life Scale, Life Orientation Test and Positive-Negative Affect Scale were used as data collection instruments. The psychometric properties of Turkish SHS have been analyzed using exploratory and confirmatory factor analysis, internal consistency and criterion-related validity methods. The results have put forth that the Turkish SHS displays a unidimensional structure and that its internal consistency coefficient is at an acceptable level. In addition, Turkish SHS has shown good criterion-related validity with other tools used for measuring subjective well-being. As a result, it can be stated that the Turkish version of SHS is a valid and reliable measurement tool for evaluating subjective happiness.

Keywords: Subjective Happiness Scale, happiness, validity, reliability

Özet

Öznel Mutluluk Ölçeği (ÖMÖ) global öznel mutluluğu ölçmek üzere geliştirilmiştir. Bu çalışmanın amacı ÖMÖ'nün Türkçe versiyonunun psikometrik özelliklerini üniversite öğrencilerinden ve halktan oluşan örneklemlerde incelemektir. Çalışmaya toplam 696 kişi (348 üniversite öğrencisi/222 halk grubu) katılmıştır. Çalışmada veri toplama araçları olarak ÖMÖ ile birlikte Oxford Mutluluk Ölçeği, Yaşam Doyumu Ölçeği, Yaşam Yönelimi Ölçeği ve Pozitif-Negatif Duygu Ölçeği kullanılmıştır. ÖMÖ-TR'nin psikometrik özellikleri açımlayıcı ve doğrulayıcı faktör analizi, iç tutarlık ve ölçüt bağıntılı geçerlik yöntemleriyle incelenmiştir. Sonuçlar ölçeğin tek faktörlü olduğunu ve iç tutarlığının yeterli olduğunu ortaya koymuştur. Ayrıca ÖMÖ-TR'nin öznel iyi oluşu ölçen diğer ölçme araçlarıyla anlamlı düzeyde ilişkili olduğu sonucuna ulaşılmıştır. Sonuç olarak, ÖMÖ-TR'nin mutluluğu değerlendirmede geçerli ve güvenilir bir ölçme aracı olarak kullanılabileceği söylenebilir.

Anahtar Kelimeler: Öznel mutluluk ölçeği, mutluluk, geçerlik, güvenirlik

Introduction

Happiness is one of the leading and most researched topics in positive psychology. Studies on happiness have increased especially after the 1980s. In parallel to this interest, many studies have been carried out related with the definition and measurement of happiness (Argyle, Martin, & Crossland 1989; Csikszentmihalyi, 1990; Diener, 1984; Myers & Diener, 1995; Seligman, 2002).

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Even though the numbers of studies on happiness are quite few in Turkey, an increasing interest is observed especially after the 2000s (Civitci & Civitci, 2009; Dost, 2010; Eryılmaz, 2011). When relevant literature is examined, it can be seen that measurement tools such as Bradburn's (1969) Affect Balance Scale, Oxford Happiness Inventory (Argyle et. al., 1989), Positive-Negative Affect Scale (Watson et. al., 1988), Satisfaction With Life Scale (Diener et. al., 1985), Depression-Happiness Scale (McGreal & Joseph, 1993) and the single item Delighted-Terrible Scale (Andrews & Withey, 1976) are used frequently.

According to Lyubomirsky and Lepper (1999), the current measures assess only one or two (affective or cognitive) of the elements of subjective happiness. However it does not globally evaluate the individual as happy or unhappy. Whereas single-item scales evaluate happiness globally however problems arise when the psychometric properties of these scales are tried to be tested. Subjective Happiness Scale (SHS) is aimed to resolve this shortcoming in this field regarding the measurement of happiness. To this end, SHS is a measurement tool that evaluates either globally or subjectively whether the individual is happy or not. SHS is composed of 4 items. Two items ask respondents to characterize themselves using both absolute ratings and ratings relative to peers, while the other two items offer brief descriptions of happy and unhappy individuals and ask respondents the extent to which each characterization describes them. The psychometric properties of SHS have been examined in societies with varying language and cultures such as Russia and USA (Lyubomirsky & Lepper, 1999), Portugal (Spagnoli et. al., 2012), Tagalog and German (Swami et. al., 2009), Malaysia (Swami, 2008), Lebanon (Moghnie & Kazarian, 2011) and Japan (Shimai et. al., 2004) and in all these studies it has displayed excellent internal consistency, good convergent validity and unitary structure.

The objective of this study is to translate SHS into Turkish and to examine the psychometric properties of a Muslim sample consisting of university students and community group. To this end, the relationships between Turkish SHS and Oxford Happiness Questionnaire (Argyle & Hills, 2002), Satisfaction with Life Scale (Diener et. al., 1985), Life Orientation Test (Scheiver & Carver, 1985) and Positive-Negative Affect Scale (Watson et. al., 1988) scores. It has also been examined whether subjective happiness scores vary according to gender, marital status and education level. It is hoped that this scale will be used in Turkish speaking regions to carry out studies on happiness.

Method

Research Participants

The study has been carried out over data obtained from two different participant groups via sampling method. The first group consists of 348 (female $n = 230$, 66.10%; male $n = 118$, 33.90%) university students currently enrolled at Sakarya University Faculty of Education. The age range of students varies between 17-37. Whereas the age average is 21.54 ($SD = 2.12$). The second group consists of a community sample of 222 (female $n = 83$, 62.61 %; male $n = 139$, 37.39%) people who are not students. The age range of this group varies between 18-61. The age average of this group is 39.03 ($S = 9.28$). Of the participants in the second group 159 (71.6%) are married, 47 (21.2%) are single and 16 (7.2%) are divorced. The education levels of 2 (0.9%) are primary school, 22 are high school (9.9%), 111 (50%) are university and 87 (39.2%) are master's. All the participants have filled out the Turkish SHS form. Whereas 126 students randomly selected from among the university students, in addition to the Turkish SHS, have also filled out the other measurement tools specified in the data acquisition tools section.

Instruments

Turkish Subjective Happiness Scale (SHS; Lyubomirsky & Lepper 1999): SHS is a 7-point Likert type self-report style measurement tool. The scale consists of 4 items. Lyubomirsky and Lepper (1999) have reported that the internal consistency of SHS varies between .79 and .94 for samples consisting of different ages, cultures, languages and professions. The test-re-test reliability has been determined to be .55-.90. Studies regarding the scale carried out in other countries and languages have put forth that SHS has a sufficient internal consistency, test-retest reliability along with convergent and discriminant validity (Mattei & Schaefer, 2004; Moghnie & Kazarian, 2011; Shimai et. al., 2004; Spagnoli et. al., 2012; Swami, 2008; Swami et. al., 2009).

*Satisfaction with Life Scale Turkish Version (SWLS; Diener et. al., 1985)*The scale consists of 5 items and contains a 7-point Likert type answer key. The scores that can be obtained from the scale vary between 5-35. High scores point to high satisfaction with life. Diener et. al. (1985) have reported the internal consistency of SWLS as .87 and its test-re-test reliability coefficient as .82. The Turkish adaptation of the scale has been carried out by Yetim (1993). Yetim (1993) has reported the test-retest reliability of the scale as .85 and its internal consistency as .76. In this study, the reliability coefficient of SWLS has been determined as .90.

Life Orientation Test Turkish Version (LOT, Scheiver & Carver 1985): LOT, consists of 12-items (eight items and four filler items) assessing dispositional optimism and pessimism, using a 5-point scale from 1 (strongly disagree) to 5 (strongly agree). High scores obtained from the scale after reverse items are translated [b] point to a high level of optimism. The Turkish adaptation of LOT has been carried out by Aydın and Tezer (1991). Accordingly, the internal consistency coefficient of the scale has been determined as .72 and the test-retest reliability coefficient obtained after carrying out the application with an interval of four weeks was determined as .77. In this study, the internal reliability coefficient of LOT has been determined as .82.

Positive and Negative Affects Scale Turkish Version (PANAS, Watson et. al., 1988): The scale is composed of a total of 20 affect statements 10 of which are positive and 10 of which are negative. Each item is rated on a 5-point scale ranging from 1 = very slightly or not at all to 5 = extremely. Watson et. al. (1988) have reported the internal consistency of the scale as .86-.90 for the Positive Affect sub-dimension of the scale and as .84-.87 for the Negative Affect sub-dimension. The Turkish adaptation of the scale has been carried out by Gençöz (2000). Gençöz (2000) has reported the internal consistency of the scale for positive affects sub-dimension as .83 and for negative affects sub-dimension as .86. In this study, the reliability coefficients for the Positive Affect and Negative Affect sub-dimensions of the scale have been determined to be .86 and .80 respectively.

Oxford Happiness Questionnaire Turkish Version (OHQ, Hills, & Argyle 2002): OHQ is a self-report type measurement tool comprised of 29 items. The scale contains a 6-point Likert type answer key (1= Strongly disagree, 6= Strongly agree). High scores obtained from the scale indicate high happiness. Hills and Argyle (2002) have reported the internal reliability coefficient of the scale to be .91. The researchers have made the Turkish adaptation of the scale. The internal consistency coefficient of the Turkish version of OHQ has been determined to be .91. The internal consistency coefficient of OHQ has been determined to be .92 in this study.

Procedure

First, SHS has been translated from English toTurkish and linguistic equivalence has been ensured. Back translation method has been used for this purpose. Three academicians have translated the scale into Turkish with Ph.D. degrees in psychological counseling and guidance that are fluent in both languages. The translations were examined and statements that best represent the items have been selected. Two different academicians then translated the obtained form Turkish to
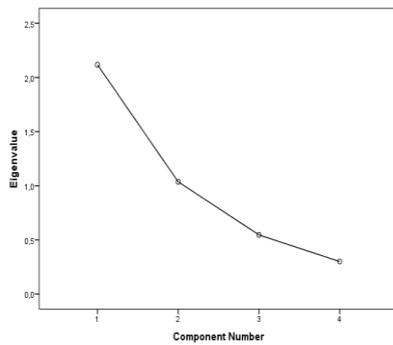
English. The obtained back translation was compared with the original text of the scale to determine whether there are inconsistencies. As a result, it was concluded that the Turkish and English forms of the scale were equivalent and applications were started. The applications on the sample group consisting of university students were carried out during class time. The students were informed about the study and volunteers were asked to participate. Whereas the applications on non-student group were carried out via e-mail.

Results

Exploratory Factor Analysis (EFA)

The construct validity studies of the Subjective Happiness Scale were carried out using exploratory and confirmatory factor analyses. In the first exploratory factor analyses, the factoring structures of the scale were examined via scree plots with no item factor limitations.

Undergraduate student's scree plot   Community sample's scree plot
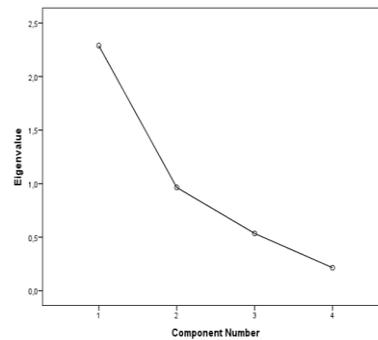
Schema 1. *Scree plots for undergraduate students and community sample*

When the scree plots of groups of university students and those who are not university students are examined, it has been observed that there are screes in the first factor of both groups and that the eigenvalue of only this factor exceeds the value of 1. Following this, it was taken into consideration that the original scale is unidimensional as well and the factor analyses were limited with only one factor. According to the obtained results, the Kaiser-Mayer Olkin measure of sampling adequacy coefficient was determined to be .634 and Barlett's test of sphericity was determined to be $\chi2 = 352.54$ ($df = 6$, $p = .000$) for the group consisting of university students whereas the Kaiser-Mayer Olkin measure of sampling adequacy coefficient was determined to be .674 and Barlett's test of sphericity was determined to be $\chi2 = 301.51$ ($df = 6$, $p = .000$) for the group consisting of those who are not university students.

Table 1. *Exploratory factor analysis for Subjective Happiness Scale*

Scale's items	University group's item factor load		Community sample's factor load	
	Communalities	Item factor load	Communalities	Item factor load
Item1	.88	.78	.83	.91
Item2	.87	.76	.80	.90
Item3	.53	.38	.55	.74
Item4	.54	.30	.31	.33

As a result of the exploratory factor analysis of university students it was determined that the item factor loads were between .30-.78 and that the one dimensional structure explains 53.94 % of the variance whereas item factor loads of the community group were determined to be between .33-.91 and that the one dimensional structure explains 57.20 % of the variance.

Confirmatory Factor Analysis (CFA)

In CFA, method of maximum likelihood was used separately on both university student group and the community group in order to examine the confirmation level of the four-item model. It was determined that the goodness of fit indexes of the university students group (NFI = .92, CFI = .93, IFI = .93; GFI = .96, RMSEA = .019, RMR = .066) and the community group (NFI = .99, CFI = 1.00, IFI = 1.00; GFI = .99, RMSEA = .035, RMR = .025) were sufficient (Meyers et. al., 2006; Raykov & Marcoulides 2006; Schumacker & Lomax, 2004; Tabachnick & Fidell, 2007).
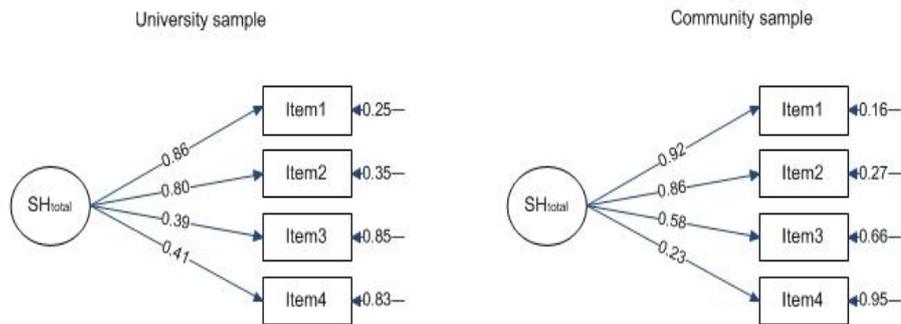

Figure 2. *Confirmatory factor analysis' model output for university and community sample*

As a result of the CFA, it was determined that the standardized item parameters of the university student group was between .39-.81 whereas the same value for the community group was determined to be between .23-.92. It was determined that all the standardized item parameters were greater than zero and loaded positive and that the significance levels were below .05. It was also determined that there was no negative loading for the error values of the items.

Criterion-Related Validity

Within the scope of the criterion related validity, relationships between Subjective Happiness Scale and Oxford Happiness Questionnaire (OHQ), Life Orientation Test (LOT), Positive-Negative Affect Scale (PANAS), Satisfaction With Life Scale (SWLS) Scale were examined. The analysis showed that a statistically singificant correlations were found between SHS and the other scales (See Table 3). According to these findings, Turkish SHS shows good convergent validity.

Table 2. *Correlations between SHS and other happiness scales*

Scales	Subjective Happiness Scale
Oxford Happiness Questionnaire	.71*
Life Orientation Test	.57*
Positive Affect Scale	.41*
Negatife Affect Scale	-.56*
Satisfaction with Life Scale	.58*

$N = 126$, *$p < .001$

Reliability

The internal consistency coefficient (Cronbach alpha) for the Turkish SHS was .65 for university students and .70 for community sample. According to these findings it can be stated that the reliability of the scale is at an acceptable level.

Descriptive Statistics

The descriptive statistics of the scale items along with the differences between groups were examined for the university students and community sample within the scope of the study. In the later stage of the study, the differences according to gender, age, marital status and education level were examined for both groups.

Table 4. *Turkish SHS items and descriptive statistics for university students and community Sample*

	Undergraduate Students (*n*=348)		Community Sample (Non-students) (*n*=222)	
	M	*SD*	*M*	*SD*
General happiness	4.92	1.33	4.73	1.39
Happiness compared to most peers	5.03	1.39	4.98	1.52
Happy people applying to self	3.93	1.70	3.68	1.64
Unhappy people applying to self	5.04	1.70	5.13	1.65
Turkish SHS Total	(18.92/4) 4.73	4.28	(18.51/4) 4.63	4.50

In Table 4 it can be observed that the average levels of the scale items for both the university students and the community sample are very close. The standard deviations of the scale items are at similar levels for both groups. The score average regarding subjective happiness has been measured as $M = 4.73$ ($SD = 4.28$) for the group of university students and as $M = 4.63$ ($SD = 4.49$) for the community sample and it has been determined that there is no significant difference between the groups ($t_{568} = 1.078$, $p = .281$).

Table 5. *Descriptive statistics for undergraduate students and community sample*

Dimensions	Sub-dimensions	University group*			Community group**		
		n	*M*	*SD*	*n*	*M*	*SD*
Gender	Women	229	19.13	4.28	83	18.10	5.17
	Men	119	18.51	4.29	139	18.77	4.05
Age	21 and under	152	19.25	4.32	-	-	-
	22 and upper	196	18.66	4.25	-	-	-
	30 and under	-	-	-	46	18.89	5.40
	31-40	-	-	-	80	18.30	4.68
	41 and upper	-	-	-	96	18.51	3.88
Mariage status	Married	-	-	-	47	18.37	5.43
	Single	-	-	-	159	18.50	4.26
	Divorce	-	-	-	16	19.25	4.10
Educational level	Under high school	-	-	-	24	18.37	4.91
	University and upper	-	-	-	198	18.53	4.46

*University group $N = 348$ **Non-university group $N = 222$

The descriptive statistics results according to gender, age, marital status and education level for university students and community sample have been given in Table 5. Prior to the analyses carried out to examine whether there are significant differences between the average scores of the participants, it was determined that the normality assumption was valid for all areas (Kolmogorov Smirnov $p > .05$). As a result of the t-test for independent samples and one way variance analysis, it was determined that there are no significant differences in the happiness levels of university students according to gender ($t_{345} = 1.283$, $p = .200$) and age ($t_{345} = 1.284$, $p = .200$) and similarly it was determined that there are no significant differences in the happiness levels of the community sample according to gender ($t_{220} = 1.080$, $p = .281$), age ($F_{2-219} = .251$, $p = .778$), marital status ($F_{2-219} = .242$, $p = .786$) and education level ($t_{220} = .165$, $p = .869$).

Discussion

In this study, the psychometric properties of SHS in a sample consisting of university students and community sample have been examined. The obtained results have put forth that Turkish SHS is a valid and reliable measurement tool. The psychometric properties of the Turkish SHS have been examined via exploratory and confirmatory factor analysis, internal consistency and convergent validity methods. As a result of the exploratory factor analysis, a one-factor structure has been obtained similar to the original form. This one factor form was examined via corrective factor analysis and it was determined that the goodness of fit indexes regarding the single factor structure were sufficient. Even though the internal consistency coefficient of the Turkish SHS was not as high as the values obtained in other societies, it was determined to be at an acceptable level.

Within the scope of convergent validity, relationships between Turkish SHS and other measurement tools that measure subjective well-being with optimism (Life Orientation Test). Accordingly, highly significant relationships were determined between Turkish SHS and the aforementioned scales. These findings can be evaluated as proof of the validity of the Turkish SHS.

In this study, it was also examined whether subjective happiness scores differ according to gender, age, education level and marital status. When studies carried out in other cultures were examined, it was observed that the subjective happiness score was ($M = 4.42$) in Malaysia, ($M = 5.62$) in North America and ($M = 4.02$) in Russia. Whereas in this study the subjective happiness score average was determined to be $M = 4.73$ ($SD = 4.28$) for university students and as $M = 4.63$ ($SD = 4.49$) for the community sample. No gender based difference was determined regarding subjective happiness total score in both samples. Whereas in the community sample it was determined that subjective happiness scores did not change according to age, education level and marital status.

Turkish SHS is important because it evaluates happiness globally and subjectively. It can be stated that the scale will be preferred due to its short application and ease of use. Studies on happiness are not at a sufficient level in Turkey yet. It is thought that this scale will play an important role for future studies. Also the use of this scale, which has been adapted to many different cultures, will provide important advantages and conveniences for cross-cultural studies on happiness. In conclusion, the Turkish version of SHS can be used as a valid and reliable measurement tool in relevant studies. In addition, studies regarding the psychometric properties of the scale on different sample groups such as adolescents and elders will be beneficial.

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